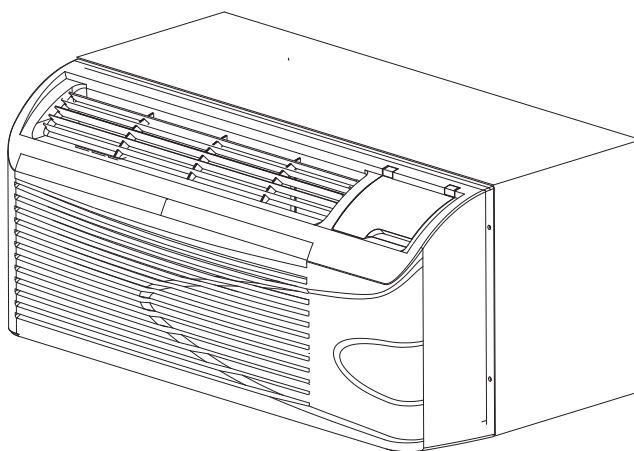


**52M Performance™ Series**  
**Packaged Terminal Air Conditioner / Heat Pump**  
**7,000 – 15,000 Btuh**



Turn to the Experts.®

## Product Data



A07228

### TABLE OF CONTENTS

	PAGE		
<b>QUICK SPECIFICATIONS</b> .....	3	<b>DIMENSIONAL DRAWINGS &amp; INSTALLATION DATA - NEW CONSTRUCTION</b> ..	24-29
<b>APPLICATIONS</b> .....	4-5	<b>WALL THERMOSTAT CONNECTIONS</b> .....	30
New Construction .....	4	<b>PERFORMANCE AND ELECTRICAL DATA</b> .....	31-34
Retrofit Replacement .....	4	<b>CFM CHART</b> .....	35
Application Considerations .....	5	<b>SOUND DATA</b> .....	36-37
<b>ORDERING DATA</b> .....	6	<b>52M TYPICAL WIRING SCHEMATIC</b> .....	38
Product Catalog Number .....	6	<b>TYPICAL WIRING SCHEMATIC FOR EM INTERFACE</b> .....	39
Required Accessory Power Cord Catalog Number ....	6	<b>TYPICAL WIRING SCHEMATIC FOR MULTIPLE PTAC UNITS CONNECTED TO A SINGLE WALL TSTAT</b> ....	40
<b>PRODUCT OVERVIEW</b> .....	7	<b>GUIDE SPECIFICATIONS</b> .....	41-44
<b>PRODUCT FEATURES &amp; BENEFITS</b> .....	8-15	<b>ACCESSORIES</b> .....	45
<b>FIELD INSTALLED ACCESSORIES</b> .....	16-23		

Valued Carrier Customer,

Carrier's Product Data Manual has been specifically developed to make your product and accessory selection easier and faster than ever. This manual will help you customize your application to ensure the greatest comfort for your guests and the highest reliability and lowest costs for you.

Enjoy the ultimate in comfort, humidity control, and energy savings with Carrier's complete line of Packaged Terminal Air Conditioning (PTAC) products. The Performance series (52M), whisper quiet model, is Carrier's quietest unit ever.

The Performance refrigerant system utilizes the highest efficiency compressors and coil design to achieve maximum energy efficiency. The airflow system uses two fan motors and an indoor tangential blower wheel for maximum comfort and superior sound. Choose the 52M Performance series now and start recovering your investment immediately through energy savings, guest satisfaction and enjoy years of economical, trouble-free operation and comfort.

Thank you for choosing Carrier and investing in the highest quality air conditioning and heating system ever.

Best regards,

Lodging Products Group

# QUICK SPECIFICATIONS

## COOLING & ELECTRIC HEAT

MODEL NUMBER	Cooling Capacity BTUH (WH)	EER	Electrical Heating Capacity	Reverse Cycle Heat (BTUH)	COP	Voltage Range	Standard Indoor CFM (Dry / Wet)†			COOLING		Approx. Ship Weight lb (kg)
							Low	Med	High	AMPS	WATTS	
#52ME-U07---3	7,000 / 7,000 (2,051 / 2,051)	12.5 / 12.4	15 or 20 Amp cord	—	—	187 – 253	295 / 275	320 / 290	345 / 300	3.0 / 2.8	560 / 565	125 (56.7)
#52ME-U09---3	8,800 / 9,000 (2,579 / 2,638)	11.4 / 11.4	only*	—	—		300 / 270	330 / 300	360 / 320	3.9 / 3.7	770 / 790	125 (56.7)
#52ME-U12---3	12,000 / 12,100 (3,517 / 3,546)	11.4 / 11.5	15, 20 or 30 Amp	—	—		310 / 280	330 / 300	360 / 320	5 / 4.7	1,050 / 1,050	140 (63.5)
#52ME-U15---3	14,600 / 14,800 (4,279 / 4,338)	9.7 / 9.8	cord only*	—	—		320 / 300	360 / 315	385 / 320	7.6 / 6.6	1,505 / 1,510	150 (68.0)
52ME-U07---4	7,000 (2,051)	12.4	15 or 20 Amp cord	—	—	239 – 292	295 / 275	320 / 290	345 / 300	2.4	565	125 (56.7)
52ME-U09---4	9,100 (2,667)	11.7	only*	—	—		300 / 270	330 / 300	360 / 320	3.3	790	125 (56.7)
52ME-U12---4	12,100 (3,546)	11.5	15, 20 or 30 Amp	—	—		310 / 280	330 / 300	360 / 320	4.4	1,050	140 (63.5)
52ME-U15---4	15,000 (4,396)	10.0	cord.*	—	—		320 / 300	360 / 315	385 / 320	5.9	1,500	150 (68.0)

## HEAT PUMPS

Model No.	Cooling Capacity BTUH (WH)	EER	Electrical Heating Capacity	Reverse Cycle Heat BTUH (WH)	COP	Voltage Range	Standard Indoor CFM (Dry / Wet)†			COOLING		Approx. Ship Weight lb (kg)
							Low	Med	High	AMPS	WATTS	
#52MQ-U07---3	7,000 / 7,000 (2051 / 2051)	12.2 / 12.3	15 or 20 Amp cord	6,500 / 6,600 (1910 / 1934)	3.5 / 3.4	187-253	295 / 275	320 / 290	345 / 300	3.0 / 2.8	574 / 569	125 (56.7)
#52MQ-U09---3	9,000 / 9,200 (2638 / 2696)	11.3 / 11.3	only*	8,300 / 8,400 (2433 / 2462)	3.4 / 3.4	187-253	300 / 270	330 / 300	360 / 320	4.1 / 3.9	797 / 814	125 (56.7)
#52MQ-U12---3	12,000 / 12,000 (3517 / 3517)	11.1 / 11.1	15, 20 or 30 Amp cord only*	10,700 / 10,900 (3136 / 3195)	3.4 / 3.3	187-253	310 / 280	330 / 300	360 / 320	5.1 / 4.8	1,080 / 1,090	140 (63.5)
**52MQ-U15---3	14,100 (4132)	9.3	15, 20 or 30 Amp cord only*	13,300 (3898)	3.0	207-253	380 / 330	410 / 340	420 / 360	6.6	1,516	150 (68.0)
52MQ-U07---4	7,000 (2051)	12.4	15 or 20 Amp cord	6,400 (1876)	3.4	239-292	295 / 275	320 / 290	345 / 300	2.4	565	125 (56.7)
52MQ-U09---4	9,000 (2638)	10.9	only*	8,400 (2462)	3.5	239-292	300 / 270	330 / 300	360 / 320	3.2	825	125 (56.7)
52MQ-U12---4	11,400 (3341)	10.8	15, 20 or 30 Amp cord.*	10,600 (3107)	3.0	239-292	310 / 280	330 / 300	360 / 320	4.2	1,050	140 (63.5)

\* See Power Cord Selection chart below for heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.

† Dry = Heat Mode Indoor Standard CFM @ 230 or 265 volt / Wet = Cool Mode Indoor Standard CFM @ 230 or 265 volt

‡ Ratings shown are 208/230 volt ratings

\*\* Ratings shown are 230 volt ratings only.

## POWER CORD SELECTION:

52M PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardware connection must be used.

Model No.	Voltage	Receptacle Type	Heating (Btuh)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD-230V-15A	208/230V	15 AMP / 250V	5,630 / 6,950	1.6 / 2.0	1,650 / 2,036	8.0 / 8.9	15
PWRCORD-230V-20A		20 AMP / 250V	8,650 / 10,390	2.5 / 3.0	2,507 / 3,045	12.2 / 13.2	20
PWRCORD-230V-30A		30 AMP / 250V	13,780 / 16,990	4.0 / 5.0	4,037 / 4,978	20.5 / 21.5	30
PWRCORD-265V-15A	265V	15 AMP / 277V	6,820	2.0	2,000	8.9	15
PWRCORD-265V-20A		20 AMP / 277V	10,470	3.0	3,068	13.2	20
PWRCORD-265V-20A		30 AMP / 277V	17,110	5.0	5,015	21.5	30

NOTE: In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use of a 265V electrical subbase.



Always look for these symbols, the air conditioning industry seals of certified performance, efficiency and capacity.

52M

## APPLICATIONS

Whether you are designing a new structure or replacing packaged terminal air conditioning units in an existing building, Carrier will meet your needs.

- Hotels and motels
- Nursing homes and assisted living care centers
- Offices
- Apartments
- Single-family dwellings
- Home conversions and residential add-ons

## NEW CONSTRUCTION

The Carrier 52M Packaged Terminal Air Conditioning (PTAC) unit is designed to meet the needs of the architect, engineer, and contractor. For unit installation, Carrier's expert support network will assist in all applicable aspects of the construction project, from preparing a budget to start-up.

### ADVANTAGES FOR NEW CONSTRUCTION

#### Design Flexibility for the Architect/Engineer

- Whisper-quiet performance, indoors and out
- No bulky duct system
- No separate equipment room
- No water towers or additional cooling equipment
- No complex match-up of different HVAC components
- Less sensitivity to building orientation (sun, wind, shade)
- Optional architectural grille to permit custom exterior appearance

#### Initial Cost Savings for the Building Owner

- No expensive component HVAC system purchase
- No equipment room or maintenance engineering staff
- Two-part delivery to minimize on-site damage
- Weather-protected wall sleeve that goes in place during construction; chassis that slides in place after construction
- No seasonal changeover required for cooling or heating - units are self-contained comfort systems

### Lower Operating Costs and Reliable Comfort for The Occupant

- Heat pump models offer substantial savings over models with conventional electric resistance heaters
- Individual units allow tenants to choose the degree of comfort and operating economy.
- Rapid servicing reduces downtime: complete chassis can be replaced in minutes without disrupting other occupants.
- Each unit operates independently of other units in the building. No dependency by building on central HVAC system.

## RETROFIT/REPLACEMENT

If you are replacing a unit in an existing wall sleeve, your options include:

- Replace the existing wall sleeve with a Carrier Weather Last™ sleeve. See accessory sleeve section for selecting the correct sleeve for your application.

**NOTE:** in most cases, when replacing the wall sleeve, the exterior grille must also be replaced.

- Use an existing sleeve and exterior grille. The Carrier 52M series PTAC will fit into:
  - The following major competitors' wall sleeves/grilles: GE, Amana, Trane, Friedrich and Bryant, and NO accessory retrofit kit is required.
  - Replacing older Carrier PTAC products, 52P, 52C, 52S and Carrier 52B, and NO accessory retrofit kit is required.
  - Friedrich T series and ZoneAire wall sleeves, with a required wall sleeve extension (see accessory Friedrich Retrofit Wall Sleeve Adapter).

**IMPORTANT: All non-Carrier sleeve or exterior grille retrofit applications need prior approval from Carrier. Please contact your Carrier representative for assistance.**

## APPLICATION CONSIDERATIONS

Installation instructions are shipped with all PTAC units. It is important that air conditioning systems be properly sized and installed for each application in order to achieve the desired temperature and humidity levels within the space to be conditioned. It is strongly recommended that a professional engineer match the PTAC units with the building structure and climate.

The following application considerations are all important in choosing the proper PTAC system for the building structure.

### Undersizing

If a PTAC unit is undersized (cooling capacity is less than required capacity for an application), the unit will not be able to cool the space down to the desired temperature during very hot days. The result could be warm and humid or warm and dry conditioned space.

### Oversizing

If a PTAC unit is oversized (cooling capacity is greater than required capacity for the specific application), the unit will cool the space down to the desired temperature too quickly.

The unit will cycle on and off, however, dehumidification only takes place when the unit is operating. The result of this type of application in a hot and/or humid climate would be a cool, yet excessively humid, space.

### Air Infiltration

Excessive air infiltration can intensify problems associated with undersizing or oversizing a PTAC unit. This can be the cause of insufficient cooling, dehumidification, or heating. Sources of air infiltration include vents, gaps around windows and doors, and improperly sealed floors, ceilings or wall joints.

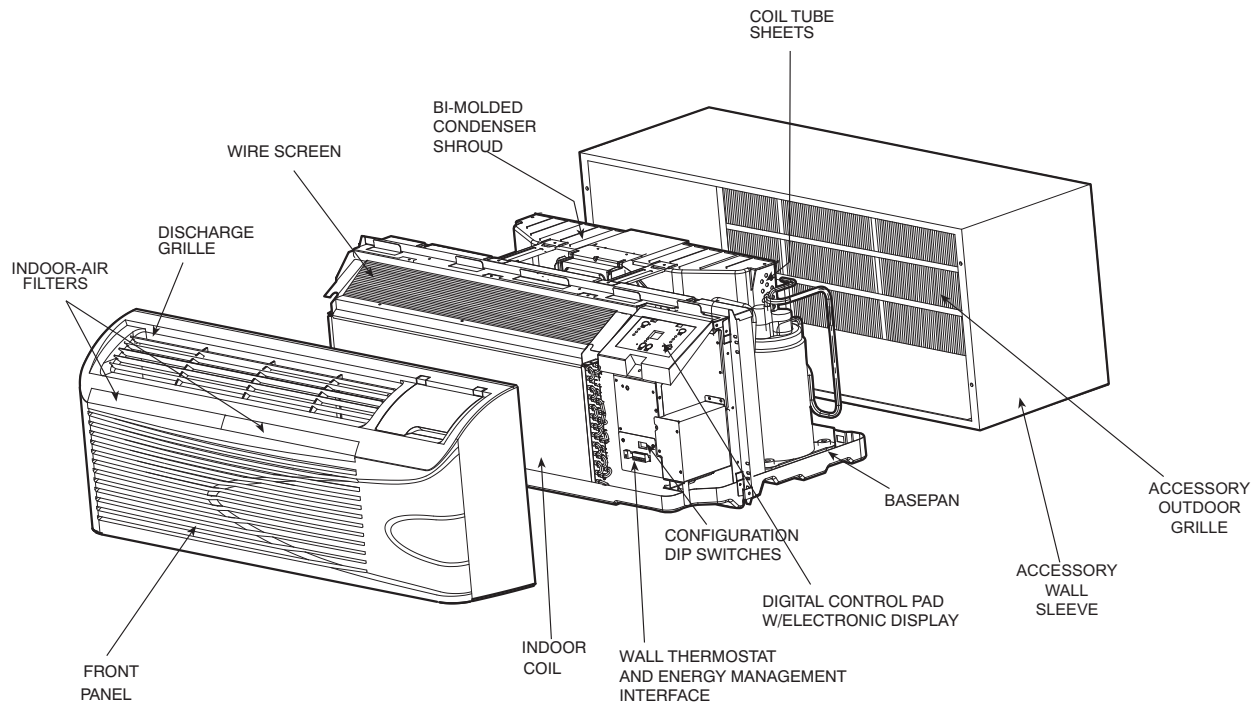
## ORDERING DATA

For immediate assistance, call 1-800-827-7435 (in U.S.A. only) or contact your local Carrier dealer.

### Standard Unit

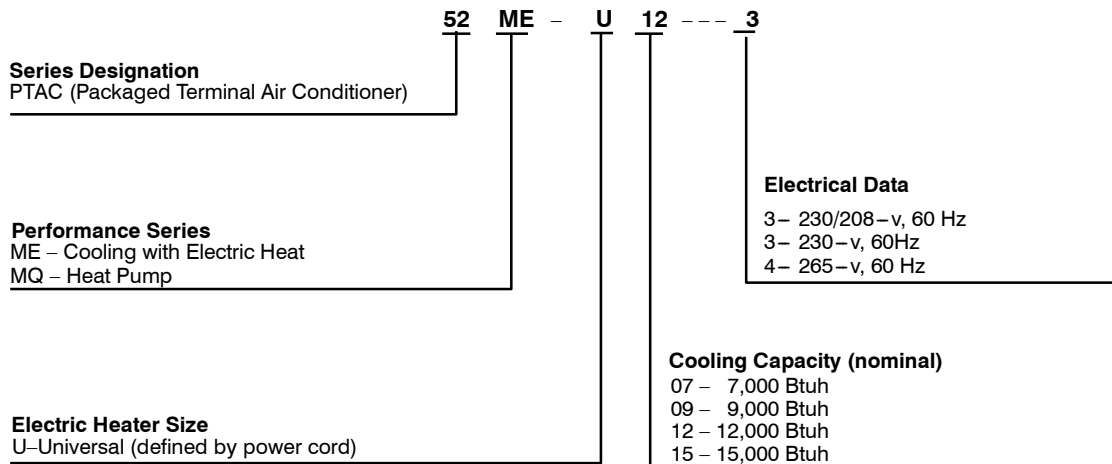
- Chassis with front panel
- Electronic controls with touchpad and digital display

Lead-time: Many models are in stock for immediate delivery; call for lead-times.



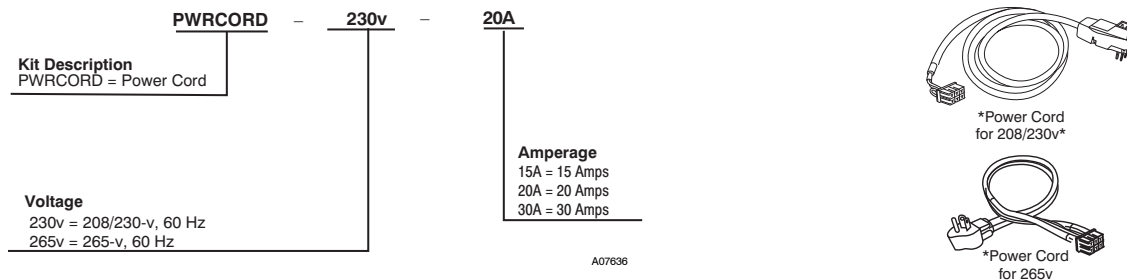
A06752

## PRODUCT CATALOG NUMBER



A08385

## ACCESSORY POWER CORD (REQUIRED) CATALOG NUMBER

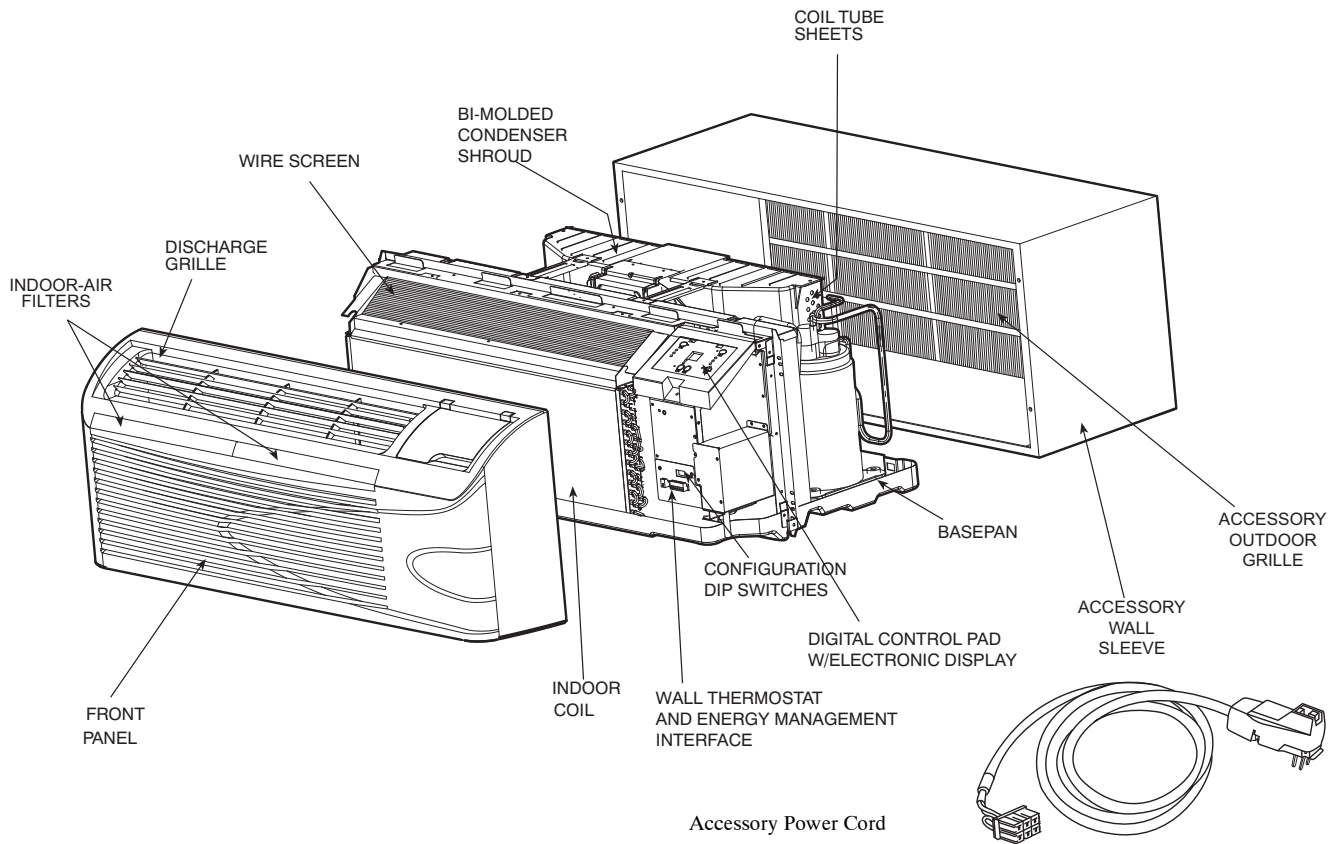


A07636

A07637

## PRODUCT OVERVIEW (52M)

This section summarizes product features covered in detail in later sections of this manual.



- **Accessory Power Cord or Hardwire Kit (required)** - Select correct power cord or hardwire kit to match voltage and amperage of electrical circuit.
- **Polymer, Metal or Extended Wall Sleeve** - Designed for rugged duty, acoustic absorption, and attractive appearance for years to come.
- **Rotary Compressors** - Provide quiet, reliable operation.
- **Copper Tube Aluminum Fin Coils** - Enhanced coils provide durability, high performance, and ease of operation.
- **Fresh Air Control Arm** - Allows outdoor air into room through vent filter for improved air quality.
- **Control Door** - Provides protection for controls and enhances appearance.
- **Condensate Removal** - Minimizes condensate water on outside of building.
- **Two-Piece Filter Design** - Provides improved air filtration and can be removed easily for cleaning.
- **Louvered Front Panel** - Made of high impact polystyrene. Provides improved performance and quiet operation.
- **Bi-Molded Condenser Shroud** - The two-piece condenser shroud allows easy access for service and maintenance to the outdoor coil and other components.
- **Digital Control Pad with Electronic Display** - Easy to select: mode, fan speed and set point with an easy to read electronic display. In °F or °C.
- **Configuration Dipswitches** - Setup the system perfect for the exact application.
- **Wall Thermostat Interface** - A terminal block for wiring up a wall thermostat that is easy to wire to and is easy to remove.
- **EM (Energy Management) Interface** - A plug for tying to an Energy Management system or Front Desk Control. Easy to wire to and easy to remove.

## PRODUCT FEATURES AND BENEFITS (52M)

- Improved sound for quiet operation
- Exceeds ARI (Air Conditioning and Refrigeration Institute) minimum efficiency requirements with exceptional energy efficiency ratios (EERs)
- Easy to operate digital keypad
- Easy to see electronic display
- Wall thermostat interface standard
- Energy Management interface standard
- Easy configuration for most applications
- Enhanced temperature and humidity control
- Self check/Self Correct features
- Condensate removal system
- Attractive, durable cabinet featuring new design
- Chassis that easily retrofits to most major competitors' sleeves without use of retrofit kit
- Low operating costs
- No bulky duct system
- No seasonal changeover

### QUIET OPERATION

Occupants and neighbors are protected against noise intrusion. Indoor sound reduction is achieved through the units' two-fan motor and tangential fan design that provides a smooth, uniform air discharge. Outdoors, the rotary compressor provides quiet, reliable operation.

### MOST EFFICIENT PERFORMANCE

High EERs provide excellent operating economy. The system operates without bulky ductwork, separate equipment room, and complex match-up of different components. Heating and Cooling modes are available without seasonal changeover.

### EFFICIENT FAN MOTOR

An efficient, totally enclosed PSC (permanent split capacitor) indoor fan motor provides a choice of high, medium or low speeds for heating and cooling. A fan-only setting provides air circulation. **The fan motors, both indoor and outdoor, require no maintenance and no lubrication.**

### FULL LINE OF CARRIER ACCESSORIES

- Weather Last™ Polymer, metal or extended Wall Sleeves
- Exterior Grilles
- Electrical Connection Kits
- Subbases
- Condensate Drain Kit
- Remote Control Thermostats
- Power Vent Kit

### COMFORTOUCH DIGITAL CONTROL

- **Temperature Display and Touch Pad on Unit**
  - Precise and easy-to-use
- **Continuous Temperature Sensing**
  - Ideal Comfort for your guests
- **Cooling, Heating and Fan Modes**
  - One unit for all seasons
- **Electronic Temperature Limiting**
  - Reduces operating costs
- **Auto Restart and Random Restart Delay**
  - Automatically restarts after a power failure
- **Freeze Protection**
  - Protects unoccupied rooms from freezing temperatures
- **Emergency Heat (Heat pump models)**
  - Bypasses compressor operation and activates electric heater for guest comfort
- **Remote Control Options**
  - The ultimate in installation flexibility; Wired, Wireless or Energy Management

### SILENCER SYSTEM™

- **Three Speed Indoor Fan**
  - More comfort options for guests to choose from
- **Dual Motor Technology**
  - Separate Indoor and Outdoor Motors allows one of the quietest and most efficient units in the industry
- **Aero-Quiet™ Indoor Blower Wheel**
  - Provides quiet and consistent airflow for maximum guest comfort
- **Compressor Sound Blanket**
  - Quiet operation and low sound transmission indoors
- **Insulated Bulkhead between Indoors and Outdoors**
  - Quiet operation and low sound transmission indoors

### SMARTFAN COMFORT CONTROL

- **Programmable Constant Fan Operation**
  - Carrier Customized Comfort in heating or cooling modes
- **Quiet fan start-up and stops**
  - Smooth ramp-up and ramp-down of fan speed for quiet comfort

### EZSERV - EASE OF INSTALLATION, SERVICE AND MAINTENANCE

- Easy troubleshooting with LED onscreen displays
- 9 point diagnostics, self-check / self-correct
- Front-access, cleanable lifetime air filters
- Easy access to condenser coil for cleaning
- Blue Fin Coating Technology for easy rinsing of coils
- Universal Electric Heater

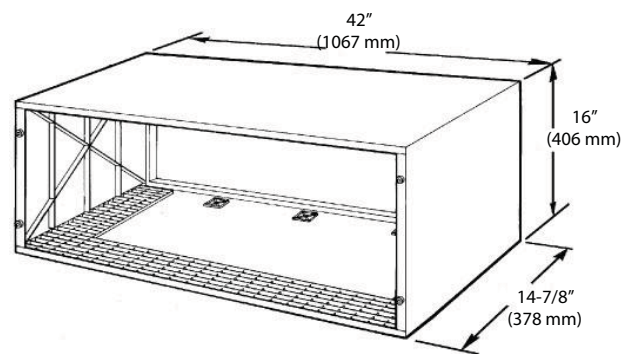


## NO-RUST WEATHER LAST™ WALL SLEEVE AND FRONT PANEL

The indoor front panel and polymer wall sleeve use nonmetallic compounds that never rust or corrode, do not support combustion, and do not give off toxic fumes. The weather-resistant feature exceeds requirements of Underwriters Laboratories and resists damage caused by impact and scratching. The Weather Last feature also insulates and has up to 10 times the acoustic absorption of metal cabinets.

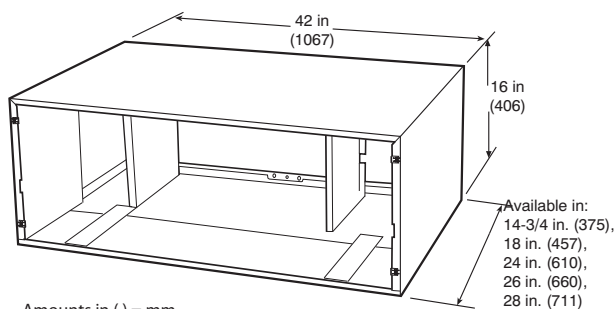
Insulated polymer wall sleeves combine all of the above features with factory-installed insulation. The insulation helps to reduce heat loss, save energy, provide better sound absorption, and reduce the risk of sleeve sweating.

Carrier's metal wall sleeves are available in a variety of sizes for most standard and deep wall applications. All metal wall sleeves come with factory-installed insulation, designed to minimize heat loss and reduce outdoor noise transmissions into the room.



A07633

### Standard Wall Sleeve (Polymer)



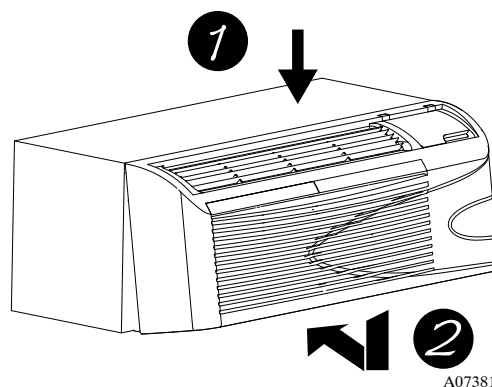
Amounts in ( ) = mm

A07381

### Standard and Deep Wall Sleeve (Metal)

## REMOVABLE FRONT PANEL

The louvered front panel fits firmly onto the chassis and features easy removal for service. It provides front air intake to enhance performance and quiet operation.

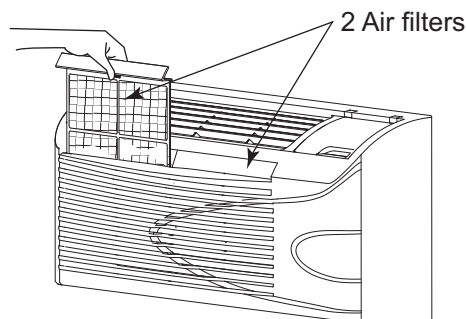


A07381

### Front Panel

## TWO-PIECE LIFETIME INDOOR FILTER

Two-piece removable filters easily slide in and out from the front of the PTAC unit and are interchangeable. The front panel does not need to be removed to access or change the filters. The filters are washable and permanent.



A07381

### Two-Piece Indoor Filter

## OUTDOOR AIR VENTILATION

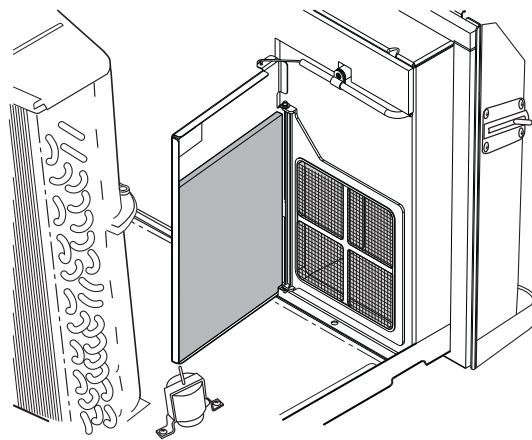
The unique vent system is activated by a two-position control. Fresh outside air is redirected by the vent door to an inside low-pressure area. A molded plastic filter prevents dirt and debris from entering the room side of the unit. The vent mechanism is made from non corrosive material ensuring reliable operation. A magnet on the door and high-pressure airflow create a tight, draft free seal when the vent door is closed.

*The vent will provide up to 65 cfm of fresh air.*

**NOTE:** If more fresh air cfm is required, a Power-Vent Kit is available (see accessories).

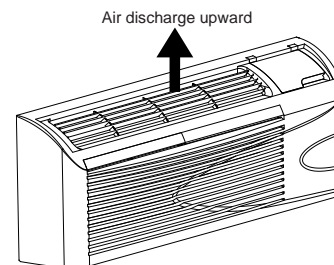
## BI-DIRECTIONAL DISCHARGE GRILLE

The discharge grille is constructed of durable polycarbonate and is reversible. Air flows upward at a 40 degree angle to the floor but can easily be adjusted to an 80 degree angle to the floor.

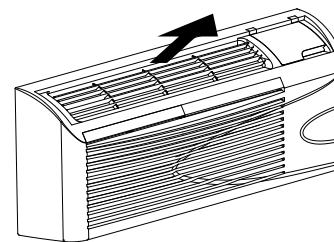


A07550

**Outdoor Air Ventilation**



Air discharge outward (Default)

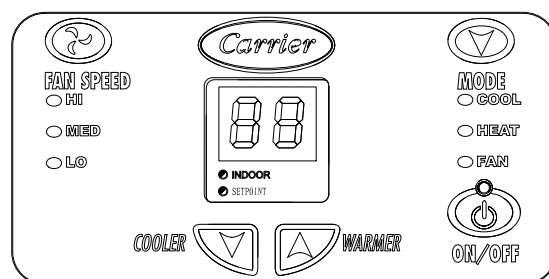


A07550

**Reversible Polycarbonate Discharge Grille**

## DIGITAL KEYPAD AND ELECTRONIC DISPLAY

The digital keypad provides a simple to operate control. The large, easy to press, “On/Off”, “Fan Speed”, “Mode”, “Setpoint Up” and “Setpoint Down” buttons make the control easy to operate. LEDs are used to show the operating conditions selected. Large numbers are used to display the Setpoint, and if configured, room air temperature.

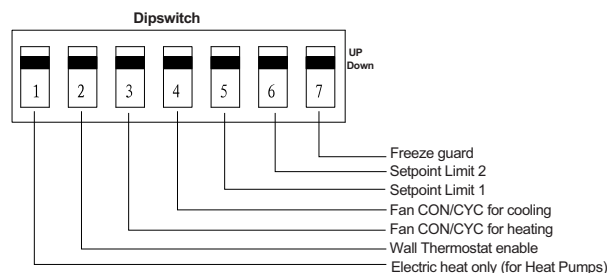


A07632

**Electronic Display**

## SYSTEM CONFIGURATION

There are many different configuration possibilities, through both dipswitches and the digital keypad, that allow you to configure the unit for your exact application. See Owner's Manual for more detailed information.



A07072

**Dipswitches**

## WALL THERMOSTAT INTERFACE

The standard wall thermostat interface provides a simple to install thermostat connection. The unit has a removable terminal connector to make field wiring easy. See more info on wall thermostat connections in the Dimensional Drawings and Installation Data Section.

### Notes:

- Thermostat wire is field supplied and recommended wire size is 18 to 20 gage solid thermostat wire.
- Wire should never be routed through the wall sleeve.
- It is recommended to include extra wires in case a wire breaks or is cut during installation.
- The thermostat is ordered separately and a Carrier PTAC approved thermostat is recommended, see the accessory chart in the back.

## EM (ENERGY MANAGEMENT) INTERFACE

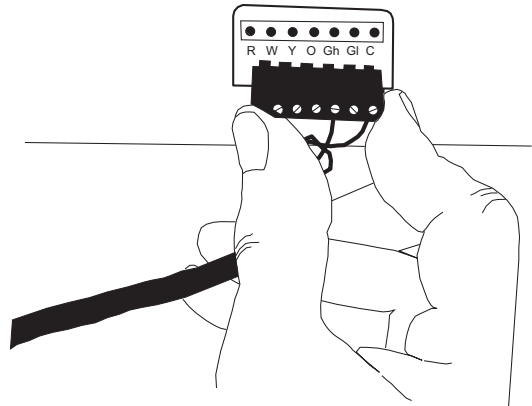
The EM interface is standard and provides a simple to install, Energy Management connection. The unit has a removable terminal connector to make field wiring easy. When 24VAC is supplied to the input (the EM connection), the unit will turn off. Once the 24VAC is removed (becomes 0 volts), the unit will turn back on.

**Note:** For more info, see the section in the back, Typical Wiring Schematic For Energy Management Interface.

## POWER CORD FOR 265V UNITS

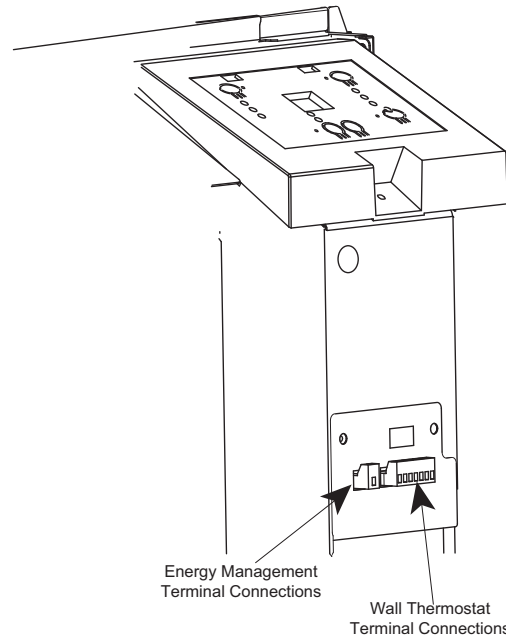
The 265v power cord extends 15-in. (381 mm) from bottom of front panel and, per UL and National Electric Codes (NEC), must plug into an electrical subbase.

**Note:** Accessory power cord and electrical subbase sold separately. (See *Accessory* section in back of this document.)



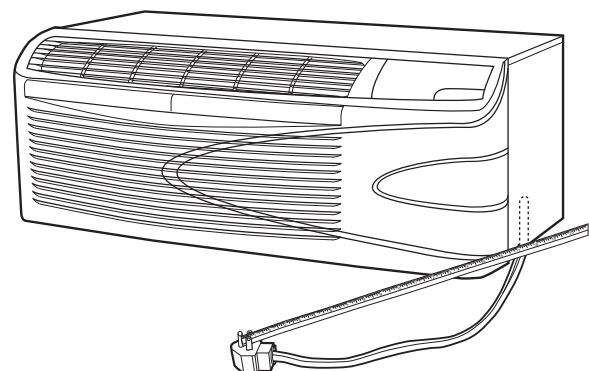
A07073

### Terminal Connector Removal and Replacement



A07634

### Wall Thermostat and Energy Management Interface

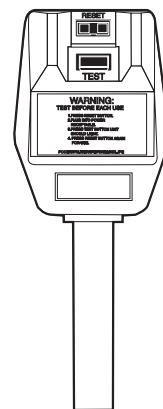


A07635

### 265V Power Cord

## POWER CORD PROTECTION FOR 230/208V UNITS

The power cord for the 208/230-v unit provides power cord protection by automatically disconnecting power during an unsafe condition. Power can be restored by pressing the RESET button.

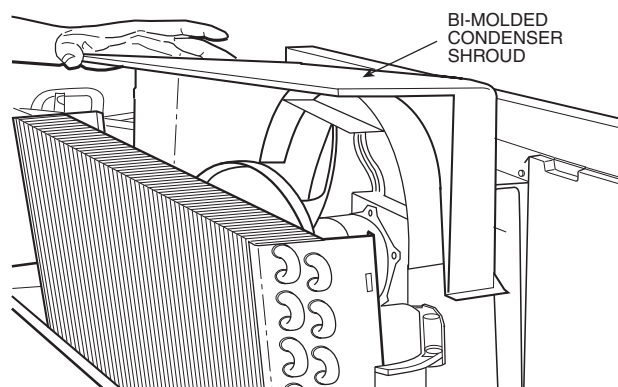


A07551

**Power cord Plug Head**

## BI-MOLDED CONDENSER SHROUD

The bi-molded condenser shroud provides easy access for service and maintenance of the condenser coil and related components.

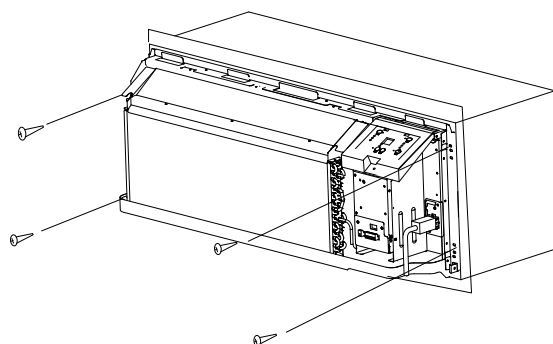


A07677

**Bi-Molded Condenser Shroud**

## EASY ACCESS TO CHASSIS

Access to the chassis simply requires removing front panel, then four easy to access screws and then sliding the chassis out of the sleeve for service or maintenance.



A07057

**Easy to Access Chassis**

## ENHANCED COPPER TUBING

Enhanced copper tubing is more efficient and durable and can be repaired in the field, if required. Because copper is a very stable metal, it is durable and resists corrosion. Enhanced copper tubing increases:

- heat transfer capability
- the efficiency of the cooling and heating processes
- thermal conductivity (by creating additional tube surface and turbulent refrigerant gas flow)

Every Carrier PTAC coil undergoes thorough leak testing and pressure testing.

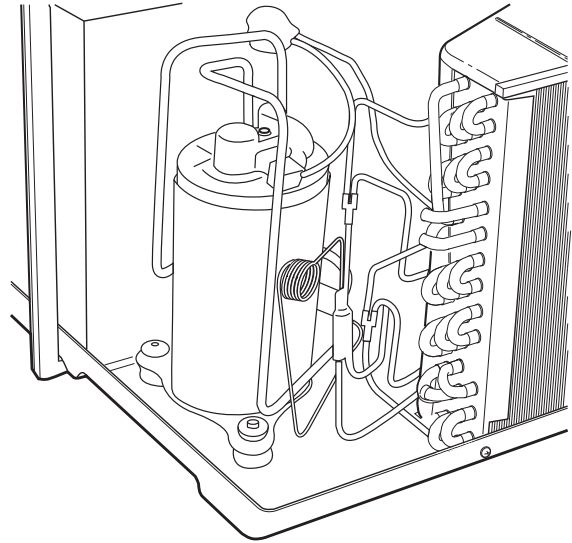
## SEAMLESS BASEPAN

Seamless drawn basepan walls add protection against water accumulation resulting from storm-driven rain with heavy wind.

Carrier's deep basepan holds up to 1-3/4 gallons (6.6 liters) of water without spilling. Closed cell foam insulators are located between the basepan and coils, keeping coils from direct contact with the basepan and providing additional protection against corrosion.

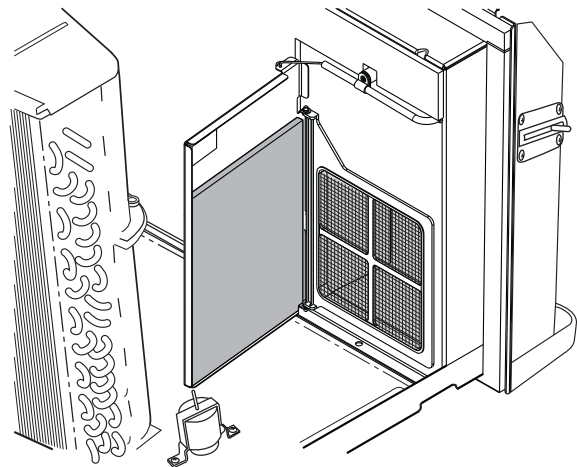
## CONDENSATE DRAIN VALVE

The temperature-activated drain valve opens when the outdoor temperature drops below 55°F (12.8°C) to prevent water from freezing in the basepan.



A07552

52M



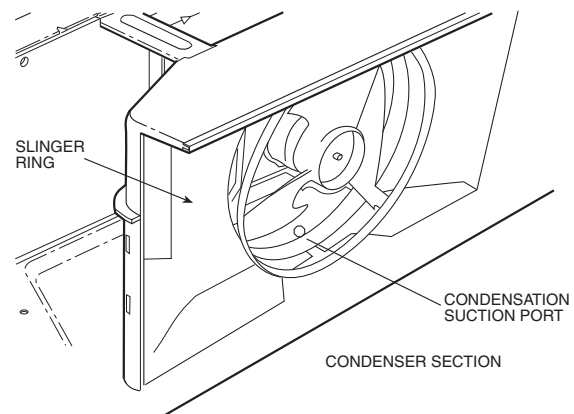
A07550

**Condensate Drain Valve Prevents Water from Freezing in Basepan**

## CONDENSATE REMOVAL

Carrier's 52M Series unit has a new condensate (water) disposal system. In addition to slinger ring technology, Carrier has developed and patented a Condensate Suction Port. The suction port, along with the slinger ring, draws in water which is sprayed up onto the outdoor coil. The water then evaporates, thus providing better disposal of excess condensate and improving unit efficiency.

**NOTE:** If it is necessary to control 100% of the condensate, the Carrier Drain Kit (Part No.: DRAIN-KIT-4PK) is recommended.



A07678

**Condensate Removal System**

## HEAT PUMPS PAY THEIR OWN WAY

Heat pump models are available at a nominal additional cost. In many locales, the payback is realized in just a few months. Cost and payback details are provided on the next page.

### SPECIAL FEATURES

#### *Two-Stage Thermostat:*

The indoor thermostat senses the indoor temperature and automatically turns on the electric heat to warm the room quickly. After the desired temperature conditions have been satisfied, the thermostat automatically switches to heat pump mode. If compressor failure occurs, the thermostat will provide backup electric heat automatically.

#### *Outdoor Thermostat:*

During the heating cycle, the outdoor thermostat senses outdoor coil temperature. It switches the unit to electric heat mode when the outdoor coil temperature is 28°F (-2.2°C) or below for one minute. The thermostat switches the unit back to heat pump mode when the outdoor coil temperature rises above 40°F (4.4°C) for ten minutes, which is enough to provide heat to meet demand. The entire operation is completely automatic.

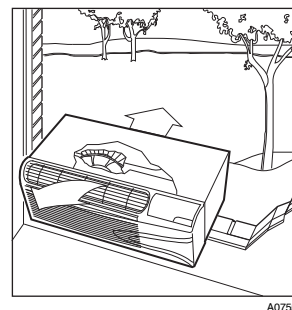
#### *Reversing Valve:*

The reversing valve provides quiet refrigerant flow when energized in heating mode. The valve controls the direction of refrigerant flow for both heating and cooling functions and remains energized as long as the controls are in the heat position. When the cooling controls are activated, the valve automatically reverses to the cooling position.

#### *Manual Compressor Override Configuration:*

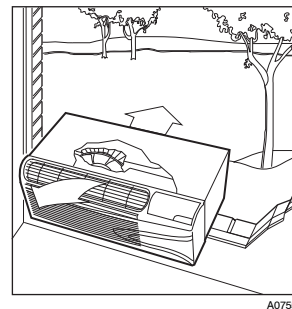
This configuration dip switch completely locks out the compressor. Note that the compressor and heater do not operate at the same time, thus conserving energy.

## HOW THE HEAT PUMP WORKS



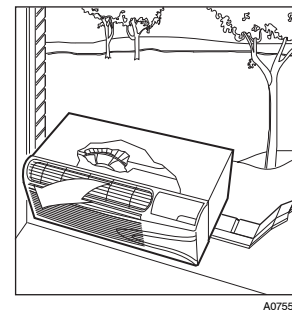
#### *In Hot Weather:*

Carrier's PTAC units provide indoor comfort in the same manner as conventional air conditioners, removing heat and humidity from indoor air. The heat and humidity is released to the outdoors. Carrier's high efficiency design saves energy and reduces cooling costs.



#### *In Cool Weather:*

When the outdoor coil temperature is above 28°F (-2.2°C), the heat pump draws heat from outdoor air and uses it to heat indoor air. Since heat is transferred and not produced, Carrier's heat pump uses less electricity and reduces energy costs significantly.



#### *In Sub-Freezing Weather:*

When the outdoor coil temperature falls below 28°F (-2.2°C) for one minute, the unit automatically switches on a built-in electric heater. The compressor stops and the indoor fan circulates warm air produced by the heater. When the outdoor coil temperature rises above 40°F (4.4°C) for ten minutes, heat pump operation resumes automatically.

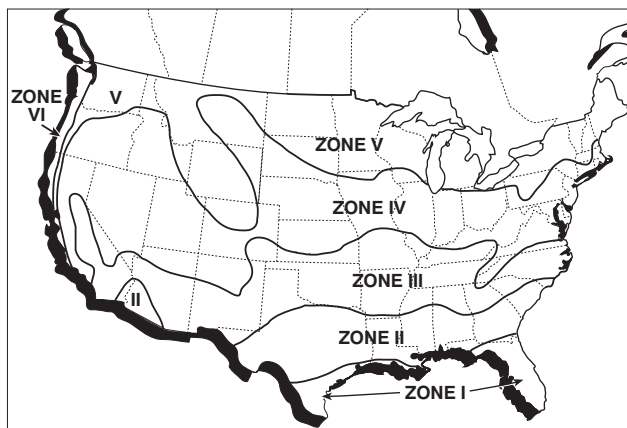


# HEAT PUMP ENERGY SAVINGS

Heat pumps save more on operating costs during the heating cycle than heat/cool models. The table below shows that the higher initial cost of purchasing a heat pump is quickly made up in lower operating costs.

Use the map to identify the climate zone's designated number. Reading down the left-hand column of the table, select the cost/kWh rate in this zone that most closely approximates your local rate. The approximated savings and payback period is found at the intersection of your zone/rate line and the desired Btuh Cooling Capacity column. Exact savings are determined by lifestyle, local electrical rates, and climatic conditions.

For more precise energy savings in your geographical location, go to [www.lodgingAC.com](http://www.lodgingAC.com) to use Carrier's energy calculator.



A07555

52M

**CARRIER HEAT PUMP INITIAL COST VERSUS SAVINGS OVER HEAT/COOL MODELS**

ZONE	ELECTRIC COST/KWH	7,000 BTUH (2,061 WH) <sup>1</sup> COOLING CAPACITY	\$60 PREMIUM	9,000 BTUH (2,638 WH) <sup>2</sup> COOLING CAPACITY	\$75 PREMIUM	12,000 BTUH (3,517 WH) <sup>2</sup> COOLING CAPACITY	\$90 PREMIUM	15,000 BTUH (4,396 WH) <sup>3</sup> COOLING CAPACITY	\$110 PREMIUM
		Annual Savings*	Payback in Months	Annual Savings*	Payback in Months	Annual Savings*	Payback in Months	Annual Savings*	Payback in Months
I	\$.06	\$ 34.26	21	\$ 43.08	21	\$ 58.20	19	\$ 68.34	19
	\$.08	\$ 45.68	16	\$ 57.44	16	\$ 77.60	14	\$ 91.12	14
	\$.10	\$ 57.10	13	\$ 71.80	13	\$ 97.00	11	\$113.90	12
II	\$.06	\$ 57.12	13	\$ 71.76	13	\$ 96.96	11	\$113.64	12
	\$.08	\$ 76.16	9	\$ 95.68	9	\$129.28	8	\$151.52	9
	\$.10	\$ 95.20	8	\$119.60	8	\$161.60	7	\$189.40	7
III	\$.06	\$ 58.02	12	\$ 72.84	12	\$ 98.40	11	\$115.38	11
	\$.08	\$ 77.36	9	\$ 97.12	9	\$131.20	8	\$153.84	9
	\$.10	\$ 96.70	7	\$121.40	7	\$164.00	7	\$192.30	7
IV	\$.06	\$ 82.02	9	\$103.02	9	\$139.14	8	\$163.14	8
	\$.08	\$109.36	7	\$137.36	7	\$185.52	6	\$217.52	6
	\$.10	\$136.70	5	\$171.70	5	\$231.90	5	\$271.90	5
	\$.12	\$164.04	4	\$206.04	4	\$278.28	4	\$326.28	4
	\$.14	\$191.38	4	\$240.38	4	\$324.66	3	\$380.66	3
V	\$.16	\$218.72	3	\$274.72	3	\$371.04	3	\$435.04	3
	\$.06	\$ 57.36	13	\$ 71.94	13	\$ 97.26	11	\$113.94	12
	\$.08	\$ 76.48	9	\$ 95.92	9	\$129.68	8	\$151.92	9
	\$.10	\$ 95.60	8	\$119.90	8	\$162.10	7	\$189.90	7
	\$.12	\$114.72	6	\$143.88	6	\$194.52	6	\$227.88	6
VI	\$.14	\$133.84	5	\$167.86	5	\$272.33	4	\$265.86	5
	\$.06	\$ 93.72	8	\$117.66	8	\$159.00	7	\$186.48	7
	\$.08	\$124.96	6	\$156.88	6	\$212.00	5	\$248.64	5
	\$.10	\$156.20	5	\$196.10	5	\$265.00	4	\$310.80	4
	\$.12	\$187.44	4	\$235.32	4	\$318.00	3	\$372.96	4

## LEGEND

kWH – Kilowatt Hour

\* Computer projections based on full cooling load at 95°F (35°C). Savings projected for 230 v ratings.

1 Heating load is 5,000 Btuh (1465 WH) at winter design point temperature.

2 Heating load is 10,000 Btuh (2931 WH) at winter design point temperature.

3 Heating load is 15,000 Btuh (4396 WH) at winter design point temperature.

**For more precise energy savings in your geographical location, go to [www.lodgingAC.com](http://www.lodgingAC.com) to use Carrier's energy calculator.**

# FIELD-INSTALLED ACCESSORIES

## WALL SLEEVES

### Weather Last™ Wall Sleeve

For the best performance and longest life, Carrier recommends genuine Carrier wall sleeves for all installations.

All Carrier wall sleeves are built with a pitch of 1/4 in. per foot (20.3 mm/m); for self-pitching of the unit, the wall sleeve must be installed level (any error should be pitched to the outside). Overflow slots on the outside of the sleeve are in place to divert excess water during severe weather.

#### Important Sleeve Installation Considerations:

- All Carrier sleeves are self pitching and must be mounted level in all directions. (Do not use rails to level sleeve.)
- The sleeve should be caulked on all sides, including both inside and outside the building.
- If more than 4 in. (101.6 mm) of wall sleeve projects into the room, an accessory subbase must be used for support.
- For all applications with an accessory subbase, wall sleeve must extend 3-1/4 in. (82.6 mm) minimum into room and must be 3-1/4 in. (82.6 mm) minimum to 5-1/2 in. (139.7 mm) maximum above floor (including carpeting) to allow for proper fit of subbase.
- For applications where the wall sleeve is mounted flush to the exterior of the building (or recessed in), Carrier recommends a field-supplied drip edge be installed to prevent water infiltration into the building.
- Insulated wall sleeves should be considered for superior sound absorption, to reduce heat loss and to prevent sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid.

### Polymer Wall Sleeves

Choose a polymer wall sleeve for maximum protection and appearance.

All Carrier's polymer wall sleeves are made from a molded polymer that is designed for strength and durability. This material has excellent corrosion resistance and a flammability rating of UL94-5V.

The sleeve surface is textured to prevent shine and hide scratches. The rib configuration on the sleeve bottom allows easy chassis removal and aids in drainage. The locating holes in the side and top panels allow for easy fastening of the sleeve to wall

openings. Refer to dimension drawings for typical wall installation and dimensions.

The sleeve's alpine mist color (a shade of beige) closely matches the front panel and blends in well with any inside or outside decor.

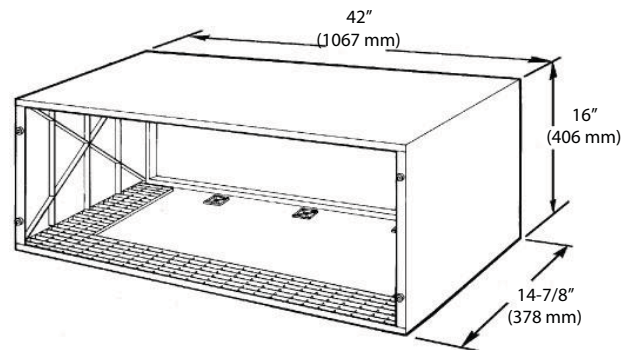
The polymer wall sleeve comes in both insulated (factory installed) or non-insulated, to meet the requirements of every application.

### Insulated Polymer Wall Sleeve

Part No.: SLEEVE-INSUL-1PK

Carrier's accessory insulated polymer wall sleeve, with factory-installed insulation, provides superior sound absorption, reduces heat loss and prevents sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid.

**IMPORTANT: Insulated Polymer Wall sleeve provides superior sound absorption, reduces heat loss and prevents sleeve sweating.**



### Corrosion-Protected Polymer Sleeve

### Non-Insulated Polymer Wall Sleeve

Part No.: WALL-SLEEVE-1PK

Carrier's accessory non-insulated polymer wall sleeve provides a superior appearance and protection for many applications.

For applications where weather conditions could influence sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid, the Insulated Polymer Wall sleeve should be considered.



## FIELD-INSTALLED ACCESSORIES (CONT.)

### Insulated Metal Wall Sleeves

Part No.: SLEEVE-STEEL-1PK

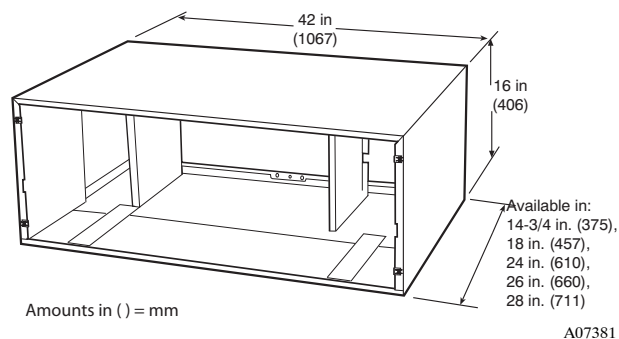
Part No.: SLEEVE-EXT18-1PK

Part No.: SLEEVE-EXT24-1PK

Part No.: SLEEVE-EXT26-1PK

Part No.: SLEEVE-EXT28-1PK

Carrier's metal wall sleeves are available in a variety of sizes for most applications and difficult installations. Choose from 14-3/4 in., 18 in., 24 in., 26 in., or 28 in. (375 mm, 457 mm, 610 mm, 660 mm, and 711 mm) standard depth sizes. All metal wall sleeves come with factory-installed insulation, designed to minimize heat loss, reduce outdoor noise transmissions into the room and prevent sleeve sweating. In addition, the metal wall sleeve provides a flammability rating higher than UL94-5V.

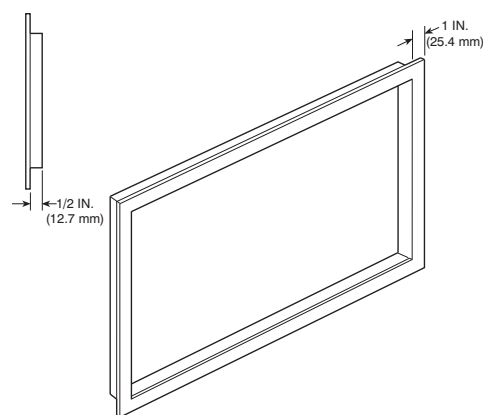


**Standard and Extended Metal Wall Sleeve**

### Wall Sleeve Molding Kit

Part No.: SLEEVE-MOLDING

For a superior look and to hide any construction imperfections, use Carrier's wall sleeve molding kit to trim the wall sleeve to the wall. The molding kit is a perfect solution and can be used with any Carrier wall sleeve (matches Carrier wall sleeve color).

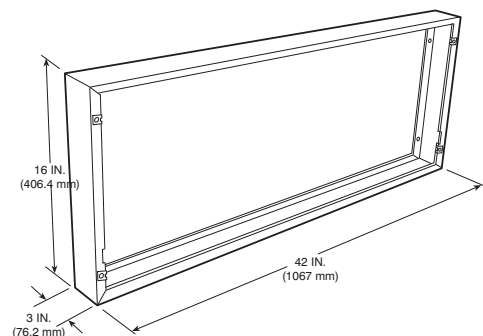


**Wall Sleeve Molding Kit**

### Friedrich (and ZoneAire) Retrofit Wall Sleeve Adapter

Part No.: FR-SLEEVE-EXT

The Friedrich (and ZoneAire) wall sleeve adapter is constructed of sheet metal and is designed to increase the depth of an existing Friedrich T-series or ZoneAire wall sleeve to accommodate Carrier's industry standard PTAC units.



**Friedrich Wall Sleeve Adapter Kit**

## FIELD-INSTALLED ACCESSORIES (CONT.)

### OUTDOOR GRILLES

Carrier recommends only the use of Carrier-supplied grilles for use on the 52M series units. However, the architectural designs of a building may dictate the use of special or oversized grilles and/or louvers. Special louvers or any special architectural treatment of the building facade that may restrict free circulation of condenser airflow should be referred to Carrier Corporation for evaluation and approval.

This premium line of decorative outdoor grilles will enhance the appearance of any building. The grilles are made of strong, durable, extruded, anodized aluminum and are designed to be mounted easily from inside the room. These elegant grilles, available in many standard colors, have baked enamel finishes containing 50% Kynar® resin, for a superior finish that will withstand the most extreme conditions.

#### Aluminum Architectural Outdoor Grilles (Louvered)

Part No.: GRILLE-ALU-CLEAR (anodized aluminum)

Part No.: GRILLE-ALU-WHITE

Part No.: GRILLE-ALU-BEIGE

Part No.: GRILLE-ALU-ALPIN (color matches Carrier wall sleeve)

Part No.: GRILLE-ALU-BRONZ

Part No.: GRILLE-ALU-MBRNZ

Part No.: GRILLE-ALU-BROWN

Part No.: GRILLE-ALU-LGREY

Part No.: GRILLE-ALU-SGREY

Part No.: GRILLE-ALU-PEACH

Part No.: GRILLE-ALU-MELON

Part No.: GRILLE-ALU-RDBRK

Part No.: GRILLE-ALU-BLUE

Part No.: GRILLE-ALU-GREEN

**NOTE:** Color samples can be ordered in packs of 10 through your Carrier Sales Representative. (Distributors: order part number 02-CLRGR001-10 through Literature Distribution).

For more information on custom colors and sizes, contact Reliable Products at 1-800-239-4621

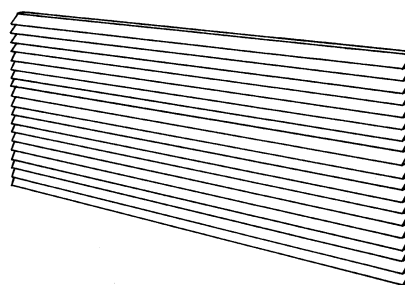
#### Polymeric Architectural Outdoor Grilles (Louvered)

Part No.: GRILLE-PLA-BROWN

Part No.: GRILLE-PLA-BEIGE

Part No.: GRILLE-PLA-ALPIN  
(color matches Carrier wall sleeve)

This value line of polymeric architectural outdoor grilles will blend attractively with most building exteriors. Mounted easily from inside the room, the one-piece, molded grille is designed for protection, enhanced appearance, and superior weather-resistance. The grille is made of durable polymer and has a colorfast, lightly textured finish that blends well with most exterior finishes.

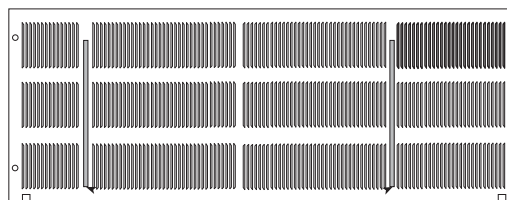


**Architectural Grille in Aluminum or Polymeric**

#### Standard Outdoor Aluminum Grille

Part No.: GRILLE-ALU-STAMP

This cost-effective, one-piece standard grille is made from durable anodized aluminum. The grille is lightweight, has a clear finish, and is easy to install from inside the room.



**Standard Grille**

## FIELD-INSTALLED ACCESSORIES (CONT.)

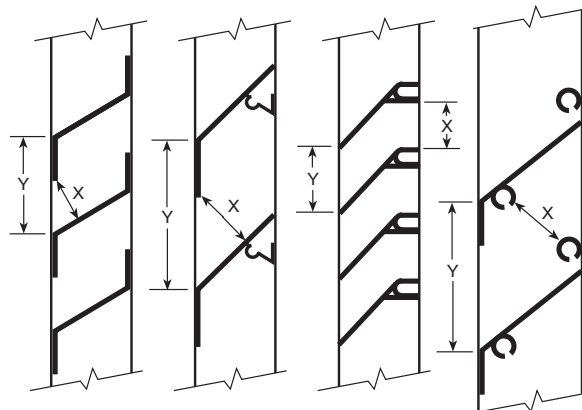
### OUTDOOR GRILLE SELECTION

**IMPORTANT:** If you wish to use a grille not made by Carrier for your Carrier unit(s), contact Carrier Application Engineering.

The following guidelines must be followed in the initial selection of any alternate exterior grille or louver:

1. The louver must have a minimum of 65% free area. Free area is the minimum area of the opening in an air inlet or outlet in which air can pass. Free Area (%) =  $X/Y$ .
2. The louver should be attached to the wall sleeve in a manner that will prevent recirculation of condenser discharge air into the inlet. In most applications, baffles, splitters, and/or gasket will be required between the chassis tube end sheets and the louver to prevent air recirculation.

The above criteria must be followed, since a louver that is restrictive or allows re-circulation will result in a reduction of the unit's capacity and efficiency and will ultimately shorten the compressor life.



**Louver Dimensional Reference**

#### Sample Calculations

$$\text{Free Area (\%)} = \frac{X}{Y} \times 100$$

$$\begin{aligned} X &= 1 \\ Y &= 1.5 \end{aligned}$$

$$\text{F.A. (\%)} = \frac{1}{1.5} \times 100 = 66.7\%$$

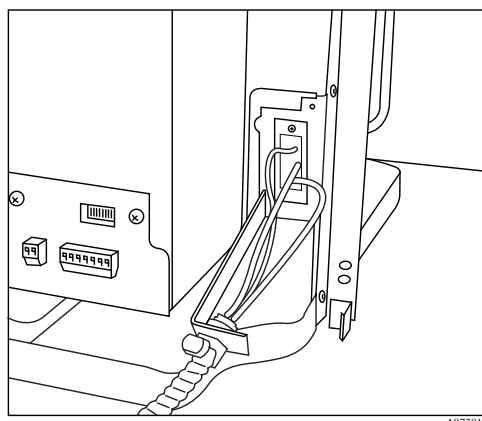
### Hardwire Kit

Part No.: 52M-HDWR-KIT-15A

52M-HDWR-KIT-20A

52M-HDWR-KIT-30A

This accessory hardwire kit provides a permanent connection to the unit. Electrical hard wiring is required when NEC (National Electrical Code) or local codes restrict the use of power cord and plug connections. The hardwire kit easily mounts on the front right side of the unit and comes with 36 inches (914.4 mm) of flexible steel conduit.



**Hardwire Kit**

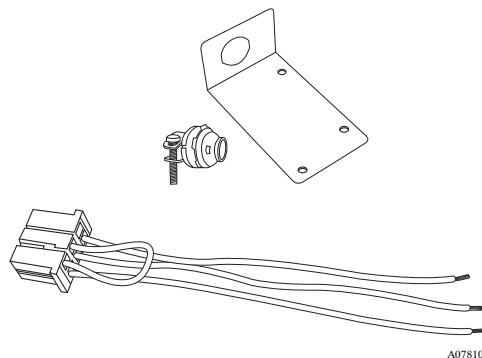
### Conduit Interface Kit

Part No.: 52M-CONINT-15A

52M-CONINT-20A

52M-CONINT-30A

The conduit interface accessory kit provides an easy wire connection to the unit to interface to existing field-supplied conduit.



**Conduit Interface Kit**

## FIELD-INSTALLED ACCESSORIES (CONT.)

### SUBBASE

Part No.: SUBBASE-230V-15A

Part No.: SUBBASE-230V-20A

Part No.: SUBBASE-230V-30A

Part No.: SUBBASE-265V-15A

Part No.: SUBBASE-265V-20A

Part No.: SUBBASE-265V-30A

Part No.: SUBBASE-NON-ELEC

Part No.: LEVELING-LEGS

This decorative subbase supports the unit and is available in three basic models: non-electrical, electrical, and hardwired.

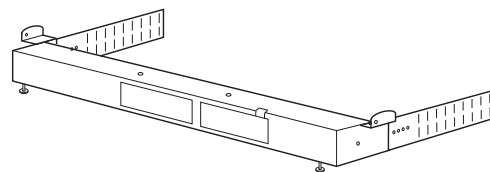
A subbase (or leveling legs) is required for installations where the wall sleeve extends 4 or more inches into the room or the wall is less than 2 in. (50.8 mm) thick. The minimum clearance between the bottom of the sleeve and the floor is 3-1/4 in. (82.6 mm), and the maximum clearance is 5-1/2 (139.7 mm) inches.

**IMPORTANT: All standard cord-connected 265-v PTAC units will require a field-installed electrical subbase accessory per UL and NEC electrical codes.**

All subbase models are pre-assembled, mount to the wall sleeve, and come with adjustable legs and side skirting to provide a finished appearance.

#### *Non-Electrical Subbase*

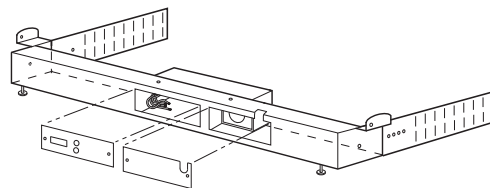
The easy to install, non-electrical subbase provides mechanical support and requires no wiring.



**Non-Electrical Subbase Assembly**

#### *Electrical Subbase*

The electrical subbase has a factory-installed electrical junction box containing a receptacle for corded packaged terminal air conditioner (PTAC) units. The electrical subbase series offers models from 230-v, 15 amp up to 265-v, 30 amp. Knockouts are provided for power source connections.



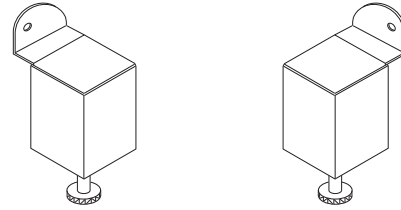
**Electrical Subbase Assembly**

## FIELD-INSTALLED ACCESSORIES (CONT.)

### Leveling Legs

Part No.: LEVELING-LEGS

Leveling legs attach easily to Carrier's wall sleeve and offer accurate leveling and support for units without a subbase. Leveling legs are adjustable from 3-1/4 to 5-1/2 inches (82.6 to 139.7 mm).



**Leveling Legs**

### Subbase Fuse Kit

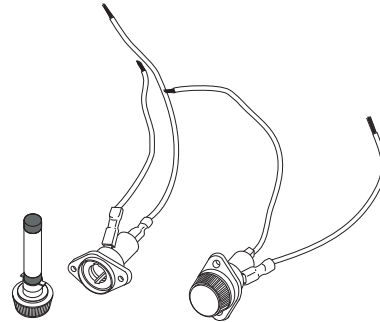
Part No.: SUBBASE-FUSE-15A

Part No.: SUBBASE-FUSE-20A

Part No.: SUBBASE-FUSE-30A

The fuse kit provides in-line over-current protection at the unit when required by NEC (National Electric Code) or local codes.

**IMPORTANT: The Fuse Kit can only be used with the electrical or hardwired subbase.**



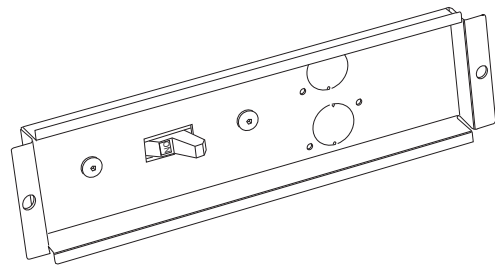
**Subbase Fuse Kit**

### Subbase Power Disconnect Switch

Part No.: SUBBASE-SWITCH

The subbase power disconnect 2-pole switch provides a recessed power disconnect for the PTAC unit when required by NEC or local codes.

**IMPORTANT: This accessory can only be used with the electrical or hardwired subbase.**



**Power Disconnect Switch Assembly**

## FIELD-INSTALLED ACCESSORIES (CONT.)

### THERMOSTATS

Carrier's full line of wall thermostats are designed to enhance every PTAC application. The Carrier Comfort™ Series of thermostats consists of programmable and non-programmable air conditioner and heat pump controls. These units feature non-mercury, non-lead based electronic controls built into a subtle, 1.2 inch (30.5 mm) slim plastic enclosure. Wall thermostats are simple and easy to use. Wall thermostats provide better temperature and humidity control as they can be placed in an optimal position in the room.

**NOTE:** See wiring diagram of multiple PTAC units controlled by one thermostat on page 40.

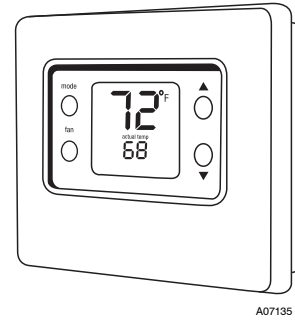
#### Non-Programmable Thermostat

Part No.: PTACSTAT-NP-HC-A (heat/cool models)

Part No.: PTACSTAT-NP-HP-A (heat pumps)

This low-voltage, easy-to-use non-programmable thermostat provides maximum guest comfort.

- Configurable continuous display back-lighting
- Heating/Cooling setpoint range is from 50°F (10°C) to 90°F (32°C).
- 24VAC compatible
- Auto changeover available
- Non-volatile memory to retain settings during a power outage.
- Optional battery operation
- English/Metric units selection
- Keypad lockout
- Configurable setpoint limits



**Non-Programmable Thermostat**

#### Digital Programmable Thermostat

Part No.: TC-PAC01 (heat/cool models)

Part No.: TC-PHP01 (heat pumps)

This micro computer controlled, 7-day programmable wall thermostat has enhanced features that provide automatic control for both heat pumps and heating/cooling units.

The programmable model includes the non-programmable features plus the following:

- Touch-N-Go programmability
- 5-2 or All Days programmable
- 4 or 2 periods per day selectable



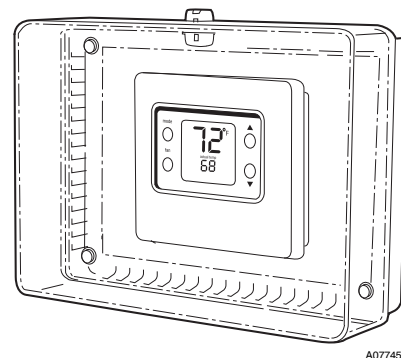
**Programmable Thermostat  
Remote Room Sensor**

#### Thermostat Locking Cover

Part No.: TSTAT-COVER-6X7

Part No.: TSTAT-COVER-7X10

The thermostat locking cover prevents unauthorized access to the thermostat.



**Thermostat Locking Cover**

## FIELD-INSTALLED ACCESSORIES (CONT.)

### Condensate Drain Kit

Part No.: DRAIN-KIT-4PK

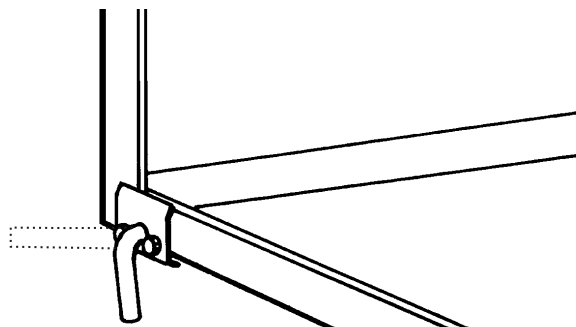
This universal drain kit may be used internally or externally to route condensate to a drainage system. It can be field-installed on any Carrier wall sleeve.

Although Carrier units are designed to dissipate all the condensate generated during normal cooling, there may be times when abnormal conditions cause more condensate than the unit can dissipate. If condensate that drips from the wall sleeve is objectionable, this internal/external drain kit should be installed.

The drain kit may be attached to the exterior right or left side of the wall sleeve for external draining or mounted to the room side of the wall sleeve for internal draining.

A 6 in. (152.4 mm) straight tube and 90° curved tube are supplied to simplify any application (1/2 in. / 12.7 mm OD copper).

**IMPORTANT:** For internal drains installed in the plastic wall sleeve, the drain must be installed on the flat area of the sleeve. It cannot be installed in the wafer area.



Drain Kit

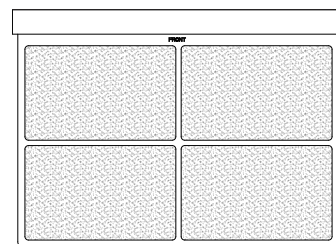
A07748

52M

### Replacement Filters

Part No.: 52M-AIRFILT-10PK

The Carrier 52M model replacement air filters come in packages of 10. The filters save energy by preventing the evaporator coils from being plugged with dirt and lint. These economical and sturdy filters are interchangeable and may be washed, vacuumed, and reused.



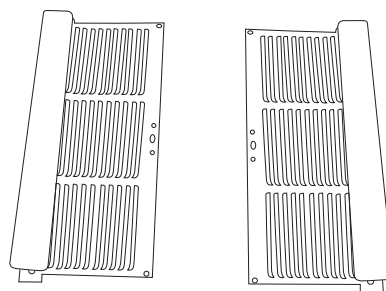
A07749

Replacement Filters

### Baffle Kit

Part No.: BAFFLE-KIT-1PK

the accessory baffle kit ensures a good seal between the unit and the exterior grille to prevent air recirculation, which can cause system failure. The accessory baffle kit is required for applications where a Carrier wall sleeve is used without a Carrier exterior grille.



A07275

Baffle Kit

# DIMENSIONAL DRAWINGS AND INSTALLATION DATA - NEW CONSTRUCTION

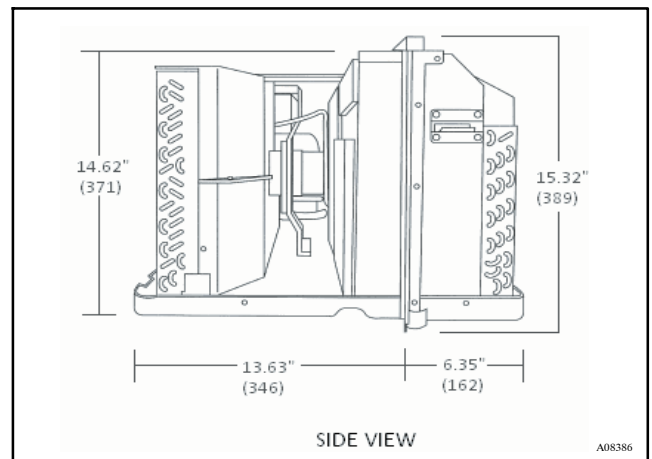
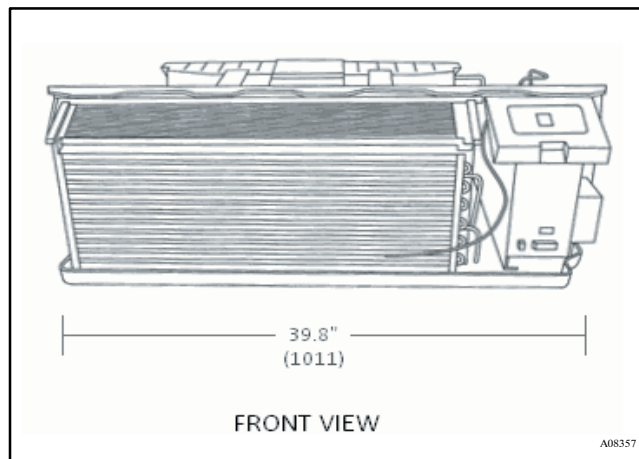
Proper building practices must be used when constructing a wall opening to support a PTAC wall sleeve and chassis.

If practices are unknown, consult your local architect or building contractor. Installed wall sleeve must be level from side to side and front to back.

COOLING & ELECTRIC HEAT				
Model No.	Power Cord Options	Voltage Range	Approx. Ship Weight lb (kg)	Approx. Operating Weight lb (kg)
52ME-U07---3	15 or 20 Amp cord only*	187 – 253	125 (56.7)	105 (47.6)
52ME-U09---3			125 (56.7)	105 (47.6)
52ME-U12---3	15, 20 or 30 Amp cord only*		140 (63.5)	120 (54.4)
52ME-U15---3			150 (68.0)	130 (59.0)
52ME-U07---4	15 or 20 Amp cord only*	239–292	125 (56.7)	105 (47.6)
52ME-U09---4			125 (56.7)	105 (47.6)
52ME-U12---4	15, 20 or 30 Amp cord.*		140 (63.5)	120 (54.4)
52ME-U15---4			150 (68.0)	130 (59.0)

HEAT PUMPS				
Model No.	Power Cord Options	Voltage Range	Approx. Ship Weight lb (kg)	Approx. Operating Weight lb (kg)
52MQ-U07---3	15 or 20 Amp cord only*	187 – 253	125 (56.7)	105 (47.6)
52MQ-U09---3			125 (56.7)	105 (47.6)
52MQ-U12---3	15, 20 or 30 Amp cord only*		140 (63.5)	120 (54.4)
52MQ-U15---3	15, 20 or 30 Amp cord only*	207 – 253	150 (68.0)	130 (59.0)
52MQ-U07---4	15 or 20 Amp cord only*	239 – 292	125 (56.7)	105 (47.6)
52MQ-U09---4			125 (56.7)	105 (47.6)
52MQ-U12---4	15, 20 or 30 Amp cord.*		140 (63.5)	120 (54.4)

\* See Power Cord Selection chart for heating capacity rating. Using 30 AMP cords on U07 and U09 models could result in damage to unit.

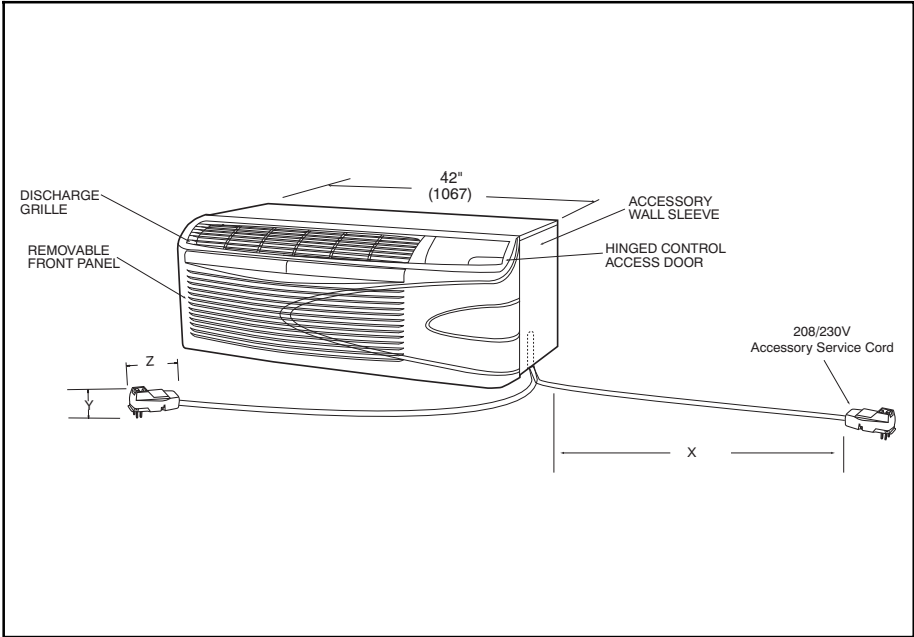




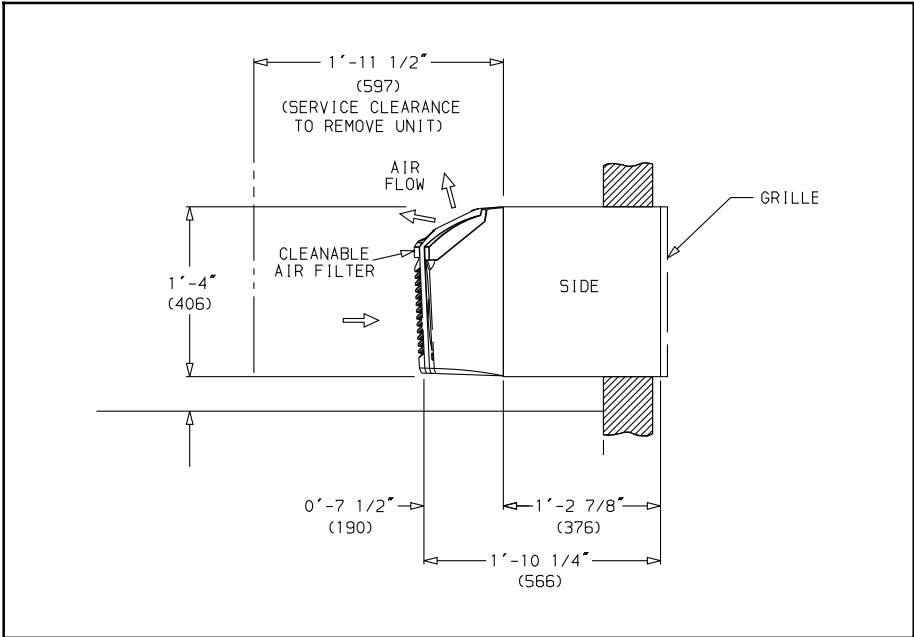
# DIMENSIONAL DRAWINGS AND INSTALLATION DATA

## CONTINUED

VOLTAGE	CURRENT	DIMENSIONS – Inches (mm)					PLUG TYPE	
VOLTS	AMPS	X	Y		Z		NEMA PLUG	NEMA RECEPTACLE
			SUPPLIER 1	SUPPLIER 2	SUPPLIER 1	SUPPLIER 2		
208/230	15	58 (1473)	2.36 (60)	2.44 (62)	3.35 (85)	4 (101)	6–15P	6–15R
208/230	20	58 (1473)	2.36 (60)	2.44 (62)	3.35 (85)	4 (101)	6–20P	6–20R
208/230	30	58 (1473)	2.55 (65)	4 (101)	2.63 (67)	3.8 (96)	6–30P	6–30R
265	15	15 (381)	1.5 (38.2)		1.46 (37.3)		7–15P	7–15R
265	20	15 (381)	2 (50)		2.48 (63.2)		7–20P	7–20R
265	30	15 (381)	2.41 (61.3)				7–30P	7–30R



Front View

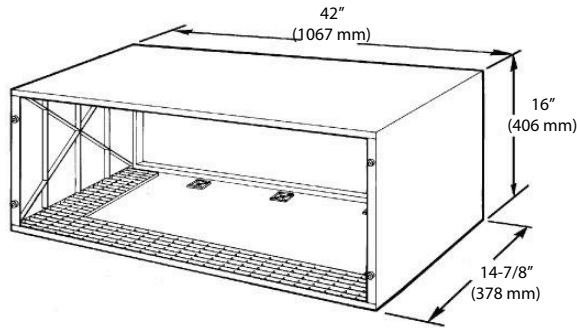


Side View

52M

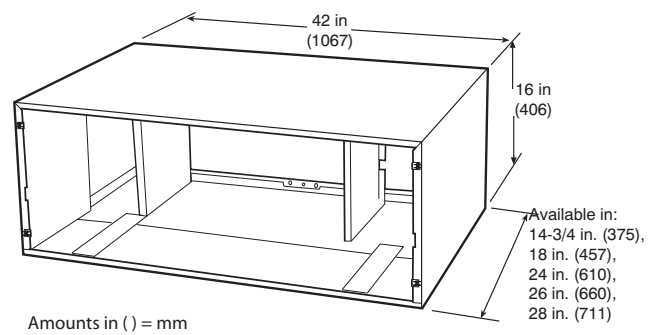
# DIMENSIONAL DRAWINGS AND INSTALLATION DATA - NEW CONSTRUCTION (CONT.)

## WALL SLEEVE MOUNTING DIMENSIONS FOR STANDARD AND ACCESSORY GRILLES



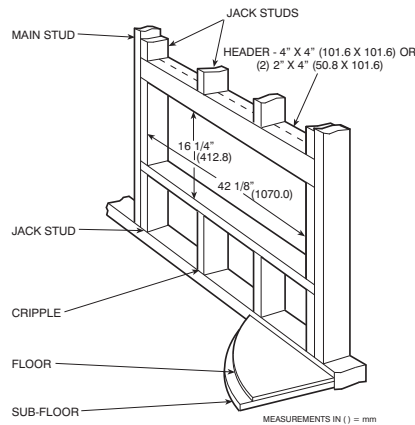
A07833

**Standard Polymer Non-Insulated Wall Sleeve**  
**Standard Polymer Insulated Wall Sleeve**



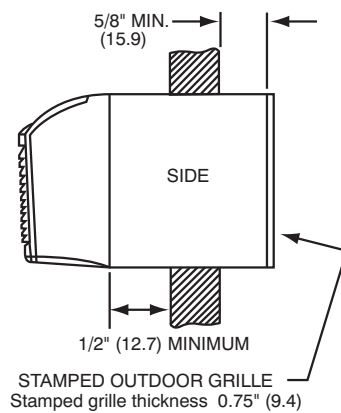
A07381

**Standard and Extended Metal Insulated Wall Sleeve**

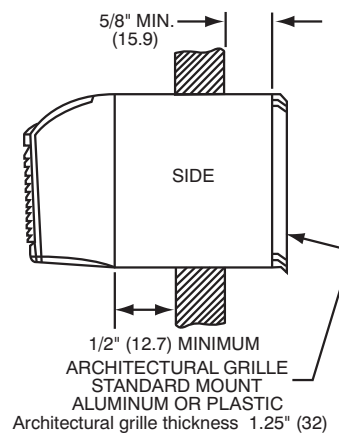


A07382

**Framing and Minimum Wall Sleeve Opening**



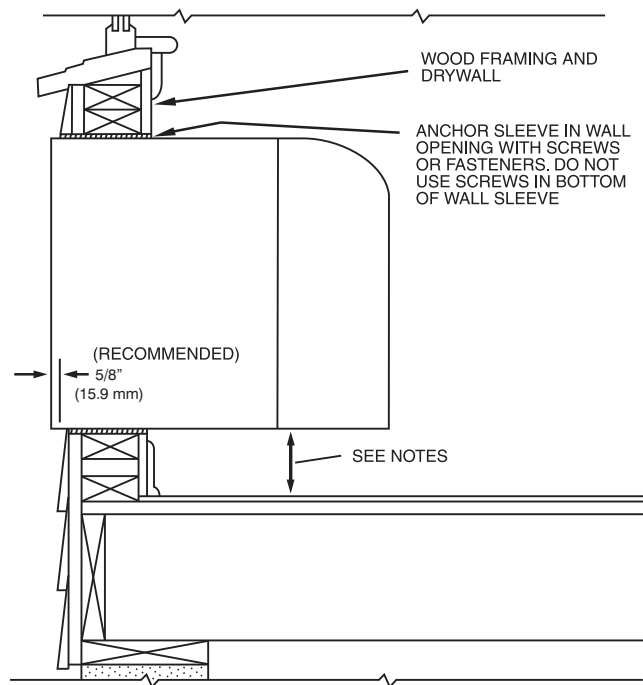
NOTE: Dimensions in ( ) are in millimeters



A07383A

**Wall Sleeve Mounting (All Models)**

# TYPICAL WALL INSTALLATION

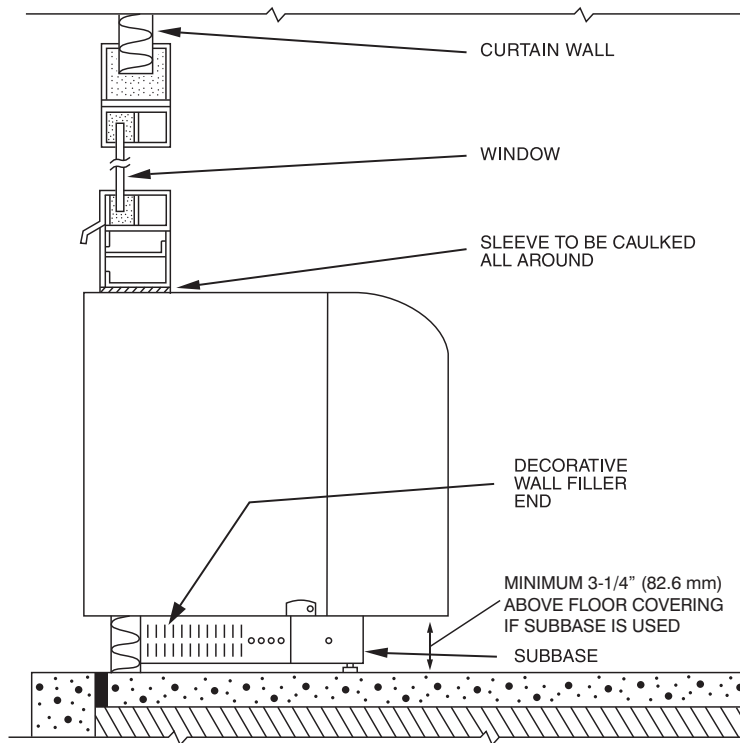


## NOTES:

1. Sleeve may be flush mounted to floor, but front panel may have to be notched to accommodate service cord.
2. If more than 4 in. (101.6 mm) of sleeve projects into room, an accessory subbase must be used for support.
3. For walls 2 in. (50.8 mm) thick or less, an accessory subbase must be used for support.
4. Caulk around sleeve on both indoor and outdoor sides.

52M

## Typical Wall Sleeve Installation

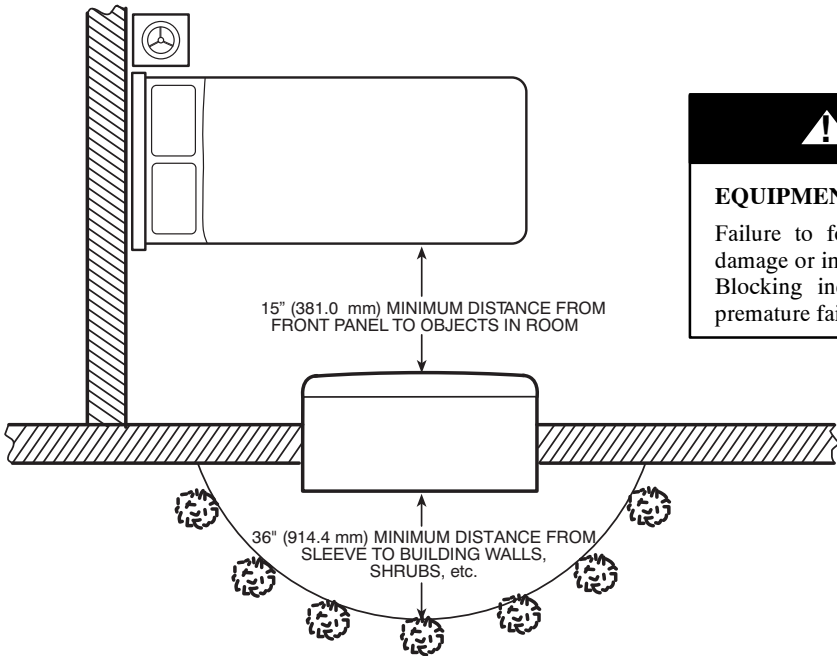



## Typical Curtain Wall Installation (All Models)

**DIMENSIONAL DRAWINGS AND INSTALLATION -  
NEW CONSTRUCTION (CONT.)**

**MINIMUM CLEARANCE FOR INDOOR AND OUTDOOR DISCHARGE AIR**

52M

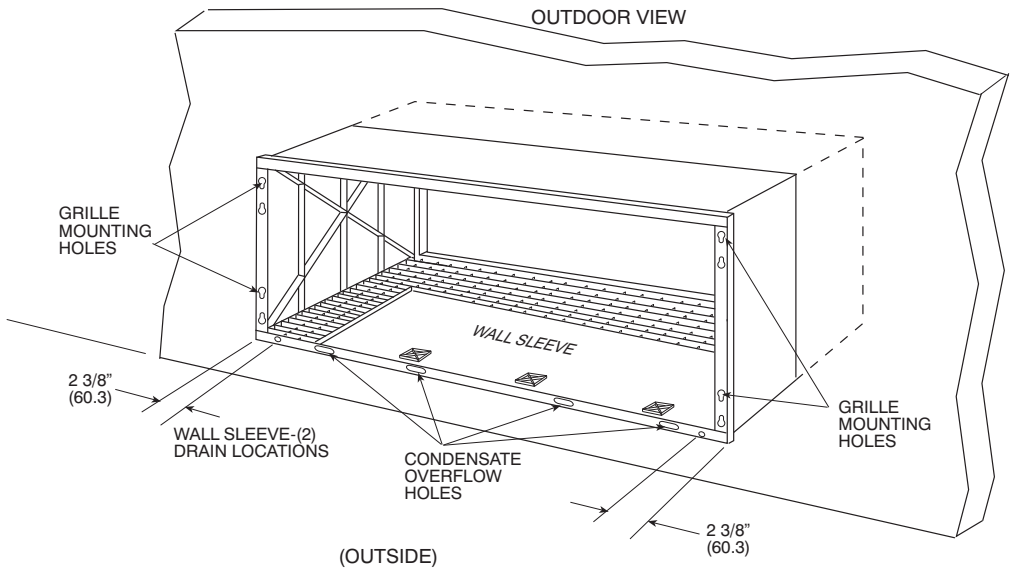


**CAUTION**

**EQUIPMENT OPERATION HAZARD**  
Failure to follow this caution may result in equipment damage or improper operation.  
Blocking indoor or outdoor discharge air could cause premature failure of unit.

**52M Indoor and Outdoor Discharge Air  
Circulation**

A07386

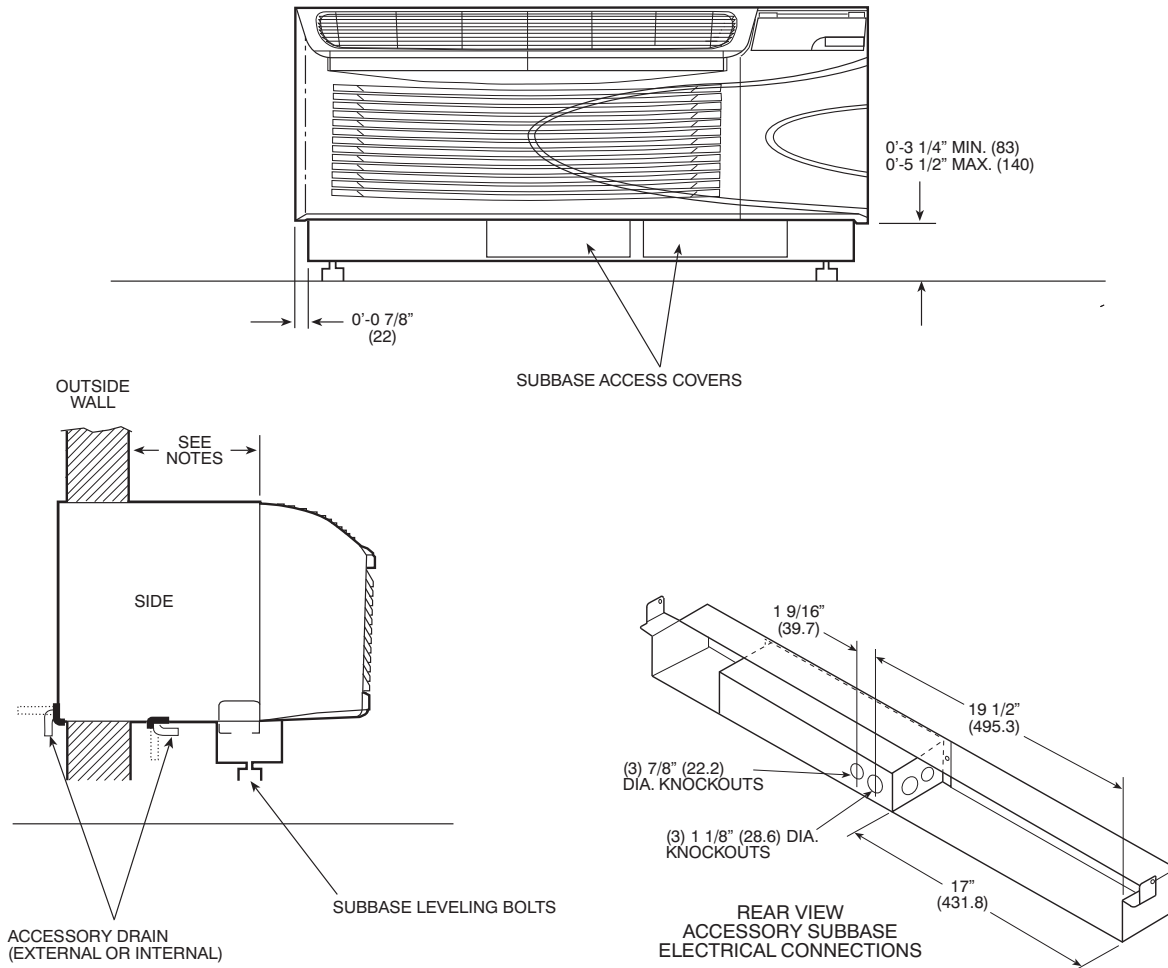


**Back of Polymer Wall Sleeve**

A07387

# DIMENSIONAL DRAWINGS AND INSTALLATION DATA - NEW CONSTRUCTION (CONT.)

## 52M WITH SUBBASE



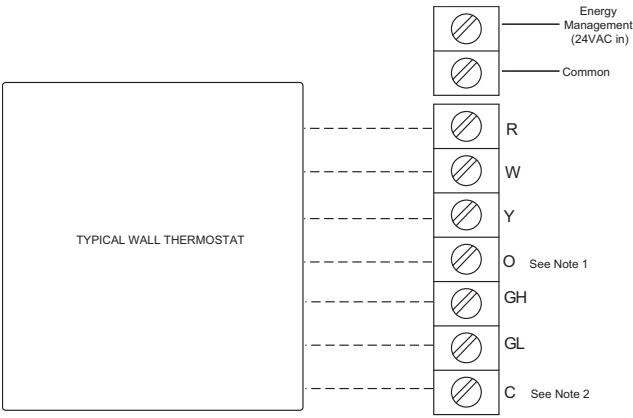
### NOTES:

- Accessory subbase is required for applications where:
  - Wall sleeve extends 4 inches (101.6 mm) or more into the room.
  - Wall thickness is less than 2 inches (50.8 mm).
  - All 265-v cord-connected applications.
- For all applications with an accessory subbase:
  - Wall sleeve must extend 4 in. (101.6 mm) into the room and 3-1/4 in. (82.6 mm) minimum above the floor
  - Subbase height is adjustable from 3-1/4 in. (82.6 mm) to 5-1/2 in. (139.7 mm) maximum above floor (including carpeting).
 Refer to wall sleeve installation instructions.

A07389

52M

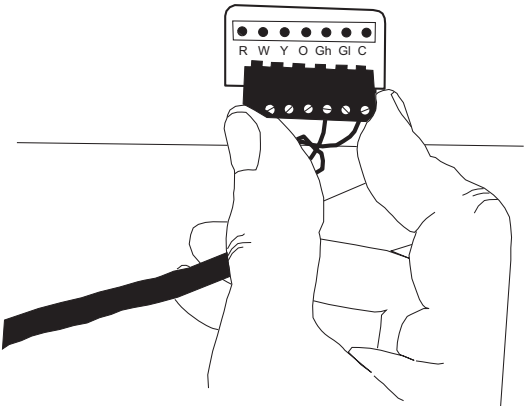
# WALL THERMOSTAT CONNECTIONS



NOTES:  
 1. Use terminal "O" for heat pump connection only.  
 2. Terminal "C" (common) is typically only required for digital thermostats.

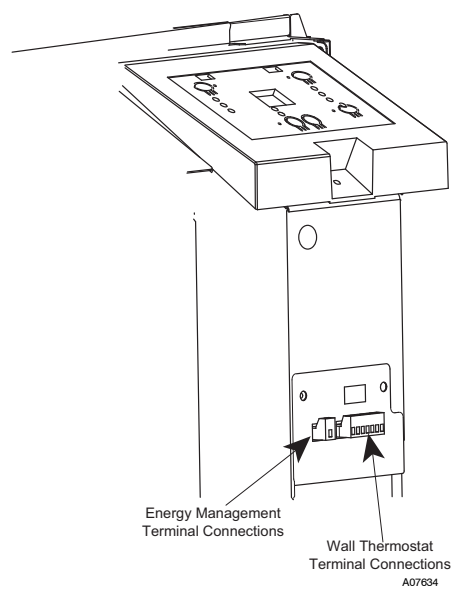
## Control Box Wire Terminal for Wall Thermostat Models

A07059



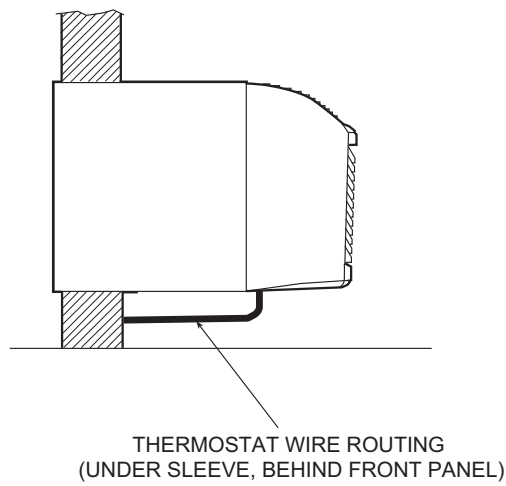
A07073

## Terminal Connector Removal and Replacement



A07634

## Terminal Connections



A07074

## Terminal Wire Routing

**NOTE:** Thermostat wire is field supplied. Recommended wire gage is 18 to 20 gage solid thermostat wire. Thermostat wire should always be routed around or under, NEVER through, the wall sleeve. The wire should then be routed behind the front panel to the easily accessible terminal connector.

# PERFORMANCE AND ELECTRICAL DATA

## MODEL 52MQ (208/230-1-60)

MODEL NUMBER 52MQ	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling BtuH (WH)	Heating					AMPS	WATTS
		Rev. Cyc. BtuH (WH)	Electric†					
U07---3	7,000 / 7,000 (2,051 / 2,051)	6,500 / 6,600 (1,910 / 1,934)	15 or 20 Amp cord only	12.2 / 12.3	3.5 / 3.4	187 – 253	3.0 / 2.8	574 / 569
U09---3	9,000 / 9,200 (2,638 / 2,696)	8,300 / 8,400 (2,433 / 2,462)		11.3 / 11.3	3.4 / 3.4		4.1 / 3.9	797 / 814
U12---3	12,000 / 12,000 (3,517 / 3,517)	10,700 / 10,900 (3,136 / 3,195)	15, 20 or 30 Amp cord	11.1 / 11.1	3.4 / 3.3		5.1 / 4.8	1,080 / 1,090
**U15---3	14,100 (4,132)	13,300 (3,898)		9.3	3.0	207 – 253	6.6	1,516

MODEL NUMBER 52MQ	POWER FACTOR (%)	FAN MOTOR				R-22 CHARGE oz (g)	MAX DEHUM. Pint/Hr (L/Hr)	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb (kg)
		Indoor Motor HP (W)	Indoor Motor Full Load Amps	Outdoor Motor HP (W)	Outdoor Motor Full Load Amps				
U07---3	100	0.024 (17.9)	0.1	0.054 (40.3)	0.4	21.9 (620)	2.0 (0.95)	0.73	125 (56.7)
U09---3	100	0.029 (21.6)	0.2	0.088 (65.6)	0.6	28.9 (820)	2.1 (1.00)	0.76	125 (56.7)
U12---3	100	0.029 (21.6)	0.2	0.088 (65.6)	0.6	36.7 (1,040)	3.7 (1.75)	0.68	140 (63.5)
U15---3	99	0.031 (23.1)	0.2	0.088 (65.6)	0.6	36.0 (1,020)	4.7 (2.22)	0.67	150 (68.0)

### LEGEND

EER — Energy Efficiency Ratio

\* Rated in accordance with ARI Standard 380-93.

† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.

‡ Coefficient of Performance (COP) at 47°F (8.3°C) outdoor ambient temperature.




\*\* Ratings shown are 230 volt ratings only.

### POWER CORD SELECTION GUIDE

52M PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD-230V-15A	208/230V	15 amp /250	5630 / 6950	1.6 / 2.0	1650 / 2036	8.0 / 8.9	15
PWRCORD-230V-20A		20 amp /250	8550 / 10390	2.5 / 3.0	2507 / 3045	12.2 / 13.2	20
PWRCORD-230V-30A		30 amp /250	13780 / 16990	4.0 / 5.0	4037 / 4978	20.5 / 21.5	30

### RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	230/208		
	250/15	250/20	250/30
OUTLET RATED VOLTS/AMPS	250/15	250/20	250/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	6-15R	6-20R	6-30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20*	30
NOMINAL HEATER SIZE	1.6 / 2.0 KW	2.5 / 3.0 KW	4.0 / 5.0 KW

### LEGEND

NEMA — National Electrical Manufacturers Association

\* May be used for 15-amp applications if fused for 15 amps.



52M

# PERFORMANCE AND ELECTRICAL DATA (CONT.)

MODEL 52MQ (265-1-60)

MODEL NUMBER 52MQ	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling Btuh (WH)	Heating					AMPS	WATTS
		Rev. Cyc. Btuh (WH)	Electric†					
U07 – – – 4	7,000 (2,051)	6,400 (1,876)	15 or 20 Amp cord only	12.4	3.4	239 – 292	2.4	565
U09 – – – 4	9,000 (2,638)	8,400 (2,462)		11.3	3.4		3.2	814
U12 – – – 4	11,400 (3,341)	10,600 (3,107)	15, 20 or 30 Amp cord	10.8	3.0		4.2	1,050

MODEL NUMBER 52MQ	POWER FACTOR (%)	FAN MOTOR				R-22 CHARGE OZ (g)	DEHUM. Pint/Hr (L/Hr)	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb (kg)
		Indoor Motor HP (W)	Indoor Fan Motor Full Load Amps	Outdoor Motor HP (W)	Outdoor Motor Full Load Amps				
U07---4	100	0.024 (17.9)	0.2	0.05 (37.3)	0.3	23.3 (660)	1.9 (0.40)	0.76	125 (56.7)
U09---4	97	0.029 (21.6)	0.2	0.06 (44.7)	0.4	29.6 (840)	2.7 (1.28)	0.7	125 (56.7)
U12---4	98	0.029 (21.6)	0.2	0.06 (44.7)	0.4	37.4 (1,060)	4.3 (2.04)	0.66	140 (63.5)

## LEGEND

EER — Energy Efficiency Ratio

\* Rated in accordance with ARI Standard 380-93.

† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.

‡ Coefficient of Performance (COP) at 47°F (8.3°C) outdoor ambient temperature.




## POWER CORD SELECTION GUIDE

52M PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD-265V-15A	265V	15 amp / 277	6820	2.0	2000	8.9	15
PWRCORD-265V-20A		20 amp / 277	10470	3.0	3068	13.2	20
PWRCORD-265V-30A		30 amp / 277	17110	5.0	5015	21.5	30

NOTE: In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use of a 265V electrical subbase.

## RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	265		
OUTLET RATED VOLTS/AMPS	277/15	277/20	277/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	7-15R	7-20R	7-30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20	30
NOMINAL HEATER SIZE	2.0 KW	3.0 KW	5.0 KW

## LEGEND

NEMA — National Electrical Manufacturers Association





# PERFORMANCE AND ELECTRICAL DATA (CONT.)

MODEL 52ME (208/230-1-60)

MODEL NUMBER 52ME	CAPACITY*			EER	COP	VOLTAGE RANGE	COOLING	
	Cooling Btuh (WH)	Heating					AMPS	WATTS
		Rev. Cyc.	Electric†					
U07---3	7,000 / 7,000 (2,051 / 2,051)	—	15 or 20 Amp cord only	12.5 / 12.4	—	187 – 253	3.0 / 2.8	560 / 565
U09---3	8,800 / 9,000 (2,579 / 2,638)	—		11.4 / 11.4	—		3.9 / 3.7	770 / 790
U12---3	12,000 / 12,100 (3,517 / 3,546)	—	15, 20 or 30 Amp cord	11.4 / 11.5	—		5.0 / 4.7	1,050 / 1,050
U15---3	14,600 / 14,800 (4,279 / 4,338)	—		9.7 / 9.8	—		7.6 / 6.6	1,505 / 1,510

MODEL NUMBER 52ME	POWER FACTOR (%)	FAN MOTOR				R-22 CHARGE OZ (g)	MAX DEHUM. Pint/Hr (L/Hr)	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb (kg)
		Indoor Motor HP‡ (W)	Indoor Motor Full Load Amps	Outdoor Motor HP (W)	Outdoor Motor Full Load Amps				
U07---3	96	0.024 (17.9)	0.1	0.054 (40.3)	0.4	21.9 (620)	1.7 (0.80)	0.79	125 (56.7)
U09---3	98	0.029 (21.6)	0.2	0.088 (65.6)	0.6	28.9 (820)	2.9 (1.37)	0.73	125 (56.7)
U12---3	100	0.029 (21.6)	0.2	0.088 (65.6)	0.6	36.0 (1,020)	3.9 (1.85)	0.71	140 (63.5)
U15---3	99	0.031 (23.1)	0.2	0.088 (65.6)	0.6	34.6 (980)	5.4 (2.56)	0.63	150 (68.0)

## LEGEND

EER — Energy Efficiency Ratio

\* Rated in accordance with ARI Standard 380-93.

† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.




‡ Fan motor indoor CFM (LO/HI) shown for 230-1-60 units.

## POWER CORD SELECTION GUIDE

52M PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD-230V-15A	208/230V	15 amp /250	5,630 / 6,950	1.6 / 2.0	1,650 / 2,036	8.0 / 8.9	15
PWRCORD-230V-20A		20 amp /250	8,550 / 10,390	2.5 / 3.0	2,507/ 3,045	12.2 / 13.2	20
PWRCORD-230V-30A		30 amp /250	13,780 / 16,990	4.0 / 5.0	4,037 / 4,978	20.5 / 21.5	30

## RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	208/230		
OUTLET RATED VOLTS/AMPS	250/15	250/20	250/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	6-15R	6-20R	6-30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20*	30
NOMINAL HEATER SIZE	1.6 / 2.0 KW	2.5 / 3.0 KW	4.0 / 5.0 KW

## LEGEND

NEMA — National Electrical Manufacturers Association

\* May be used for 15-amp applications if fused for 15 amps.



52M

# PERFORMANCE AND ELECTRICAL DATA (CONT.)

MODEL 52ME (265-1-60)

MODEL NUMBER 52ME	CAPACITY*			EER	COP	VOLTAGE RANGE	COOLING	
	Cooling Btuh (WH)	Heating					AMPS	WATTS
		Rev. Cyc.	Electric†					
U07---4	7,000 (2,051)	—	15 or 20 AMP cord only	12.4	—	239 – 292	2.4	565
U09---4	9,100 (2,667)	—		11.7	—		3.3	790
U12---4	12,100 (3,546)	—	15, 20, or 30 AMP cord	11.5	—		4.35	1,050
U15---4	15,000 (4,936)	—		10.0	—	239 – 292	5.9	1,500

MODEL NUMBER 52ME	POWER FACTOR (%)	FAN MOTOR				R-22 CHARGE OZ (g)	DEHUM. Pint/Hr (L/Hr)	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb (kg)
		Indoor Motor HP‡ (W)	Indoor Fan Motor Full Load Amps	Outdoor Motor HP (W)	Outdoor Motor Full Load Amps				
U07---4	100	0.024 (17.9)	0.2	0.054 (40.3)	0.3	23.3 (660)	1.6 (0.76)	0.80	125 (56.7)
U09---4	98	0.029 (21.6)	0.2	0.06 (44.7)	0.4	28.9 (820)	2.7 (1.28)	0.72	125 (56.7)
U12---4	100	0.029 (21.6)	0.2	0.06 (44.7)	0.4	36.7 (1040)	4.3 (2.03)	0.69	140 (63.5)
U15---4	97	0.031 (23.1)	0.2	0.06 (44.7)	0.35	34.6 (980)	5.0 (2.37)	0.66	150 (68.0)

## LEGEND

EER — Energy Efficiency Ratio

\* Rated in accordance with ARI Standard 380-93.

† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.

‡ Fan motor indoor CFM (LO/HI) shown for 230-1-60 units.




## POWER CORD SELECTION GUIDE

52M PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD-265V-15A	265V	15 amp / 277	6,820	2.0	2,000	8.9	15
PWRCORD-265V-20A		20 amp / 277	10,470	3.0	3,068	13.2	20
PWRCORD-265V-30A		30 amp / 277	17,110	5.0	5,015	21.5	30

**NOTE:** In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use of a 265V electrical subbase.

## RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	265		
	277/15	277/20	277/30
OUTLET RATED VOLTS/AMPS	277/15	277/20	277/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	7-15R	7-20R	7-30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20	30
NOMINAL HEATER SIZE	2.0 KW	3.0 KW	5.0 KW

## LEGEND

NEMA — National Electrical Manufacturers Association



# CFM CHART

52M CFM CHART

Model	Voltage	Dry CFM*			Wet CFM*		
		Low	Medium	High	Low	Medium	High
52ME/Q-U073	208	265	290	315	235	260	290
	230	295	320	345	275	290	300
52ME/Q-U074	265	295	320	345	275	290	300
52ME/Q-U093	208	270	305	345	240	280	305
	230	300	330	360	270	300	320
52ME/Q-U094	265	300	330	360	270	300	320
52ME/Q-U123	208	280	310	350	250	280	310
	230	310	330	360	280	300	320
52ME/Q-U124	265	310	330	360	280	300	320
52ME-U153	208	290	330	375	275	305	315
	230	320	360	385	300	315	320
52MQ-U153	230	380	410	420	330	340	360
52ME/Q-U154	265	320	360	385	300	315	320

\* Dry = Heat Mode or Fan Only Mode – Indoor Standard CFM  
Wet = Cool Mode – Indoor Standard CFM

52M

52M INDOOR SOUND POWER DATA

Indoor Sound Estimating Table (dBA and BELS)

Operat- ing Mode	Volts	NOMINAL SIZES (dBA)						NOMINAL SIZES (BELS)					
		52MQ			52ME			52MQ			52ME		
		7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000
Low Cool	208	55.2	NA	NA	NA	55.6	NA	NA	61.0	5.5	NA	NA	15000
	230	56.5	60.2	60.7	60.5	57.1	60.9	61.8	62.0	5.7	6.0	6.1	6.2
	265	60.7	57.9	59.9	NA	57.6	61.6	61.7	61.2	6.1	5.8	6.0	6.1
Medium Cool	208	55.4	NA	NA	NA	55.9	NA	NA	61.8	5.5	NA	NA	6.2
	230	56.8	60.6	60.8	61.0	57.3	60.7	61.8	62.3	5.7	6.1	6.1	6.2
	265	60.9	58.7	60.3	NA	57.9	62.0	62.4	61.9	6.1	5.9	6.0	6.2
High Cool	208	55.9	NA	NA	NA	55.9	NA	NA	62.3	5.6	NA	NA	6.2
	230	57.6	61.1	61.2	61.4	57.8	61.2	61.9	62.7	5.8	6.1	6.1	6.3
	265	61.1	59.5	61.2	NA	58.3	62.3	62.8	62.9	6.1	5.9	6.1	6.3
Low Fan	208	46.9	NA	NA	NA	47.4	NA	NA	54.7	4.7	NA	NA	5.5
	230	49.9	53.3	55.4	57.1	49.0	53.4	54.5	57.7	5.0	5.3	5.5	5.8
	265	51.1	51.4	53.6	NA	51.9	51.9	53.5	56.6	5.1	5.1	5.4	5.7
Medium Fan	208	49.3	NA	NA	NA	50.2	NA	NA	57.4	4.9	NA	NA	5.7
	230	52.1	54.3	56.0	58.1	51.2	54.6	55.8	59.1	5.2	5.4	5.6	5.9
	265	52.7	53.9	55.6	NA	53.5	55.1	55.6	58.0	5.3	5.4	5.5	5.8
High Fan	208	51.3	NA	NA	NA	51.9	NA	NA	59.4	5.1	NA	NA	5.9
	230	53.6	55.7	57.3	59.2	53.2	55.9	56.7	60.4	5.4	5.6	5.7	6.0
	265	54.1	55.6	57.1	NA	54.4	56.3	57.4	60.2	5.4	5.6	5.7	6.0
Low Heat	208	55.3	NA	NA	NA	51.9	NA	NA	56.2	5.5	NA	NA	5.6
	230	56.6	61.4	61.1	62.1	55.5	54.6	56.0	58.8	5.7	6.1	6.2	5.9
	265	59.0	62.2	60.7	NA	52.6	53.2	53.5	57.0	5.9	6.2	6.1	5.7
Medium Heat	208	55.2	NA	NA	NA	54.2	NA	NA	57.9	5.5	NA	NA	5.8
	230	56.7	61.2	61.1	62.0	55.6	55.9	57.1	59.7	5.7	6.1	6.2	6.0
	265	59.8	62.5	60.9	NA	53.6	55.8	55.6	58.4	6.0	6.3	6.1	5.8
High Heat	208	55.8	NA	NA	NA	54.6	NA	NA	59.7	5.6	NA	NA	6.0
	230	57.5	61.8	61.5	62.3	55.8	56.6	57.4	60.8	5.8	6.2	6.2	6.1
	265	60.2	62.7	61.5	NA	55.0	57.2	57.9	60.4	6.0	6.3	6.2	6.0

See notes on page 37

# 52M OUTDOOR SOUND POWER DATA

Outdoor Sound Estimating Table (dBA and BELS)

Operating Mode	Volts	NOMINAL SIZES (dBA)												NOMINAL SIZES (BELS)					
		52MQ						52ME						52MQ					
		7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000	7000	9000
Low Cool	208	67.4	NA	NA	NA	68.0	NA	NA	72.0	67	NA	NA	NA	6.8	NA	NA	NA	6.8	NA
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3	7.2	7.3
	265	69.9	70.7	72.9	NA	69.4	72.2	72.5	73.3	7.0	7.1	7.3	NA	6.9	7.2	7.3	7.3	7.3	7.3
Medium Cool	208	67.4	NA	NA	NA	68.0	NA	NA	72.0	6.7	NA	NA	NA	6.8	NA	NA	NA	6.8	NA
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3	7.2	7.3
	265	69.9	70.7	72.9	NA	69.4	72.2	72.5	73.3	7.0	7.1	7.3	NA	6.9	7.2	7.3	7.3	7.3	7.3
High Cool	208	67.8	NA	NA	NA	68.0	NA	NA	72.0	6.7	NA	NA	NA	6.8	NA	NA	NA	6.8	NA
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3	7.2	7.3
	265	69.9	70.7	72.9	NA	69.4	72.2	72.5	73.3	7.0	7.1	7.3	NA	6.9	7.2	7.3	7.3	7.3	7.3
Low Heat	208	67.8	NA	NA	NA	68.0	NA	NA	72.0	6.8	NA	NA	NA	6.9	7.1	7.2	7.3	6.9	7.2
	230	70.2	72.4	72.7	73.8	70.2	72.4	72.7	73.8	7.0	7.2	7.3	7.4	7.0	7.2	7.3	7.4	7.0	7.2
	265	70.6	71.7	73.2	NA	70.6	71.7	73.2	NA	7.1	7.2	7.3	NA	7.0	7.2	7.3	7.4	7.1	7.2
Medium Heat	208	67.8	NA	NA	NA	68.0	NA	NA	72.0	6.8	NA	NA	NA	6.9	7.1	7.2	7.3	6.9	7.2
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3	7.2	7.3
	265	69.9	70.7	72.9	NA	69.4	72.2	72.5	73.3	7.0	7.1	7.3	NA	6.9	7.2	7.3	7.3	7.3	7.3
High Heat	208	67.8	NA	NA	NA	68.0	NA	NA	72.0	6.8	NA	NA	NA	6.9	7.1	7.2	7.3	6.9	7.2
	230	70.2	72.4	72.7	73.8	70.2	72.4	72.7	73.8	7.0	7.2	7.3	7.4	7.0	7.2	7.3	7.4	7.0	7.2
	265	70.6	71.7	73.2	NA	70.6	71.7	73.2	NA	7.1	7.2	7.3	NA	7.0	7.2	7.3	7.4	7.1	7.2

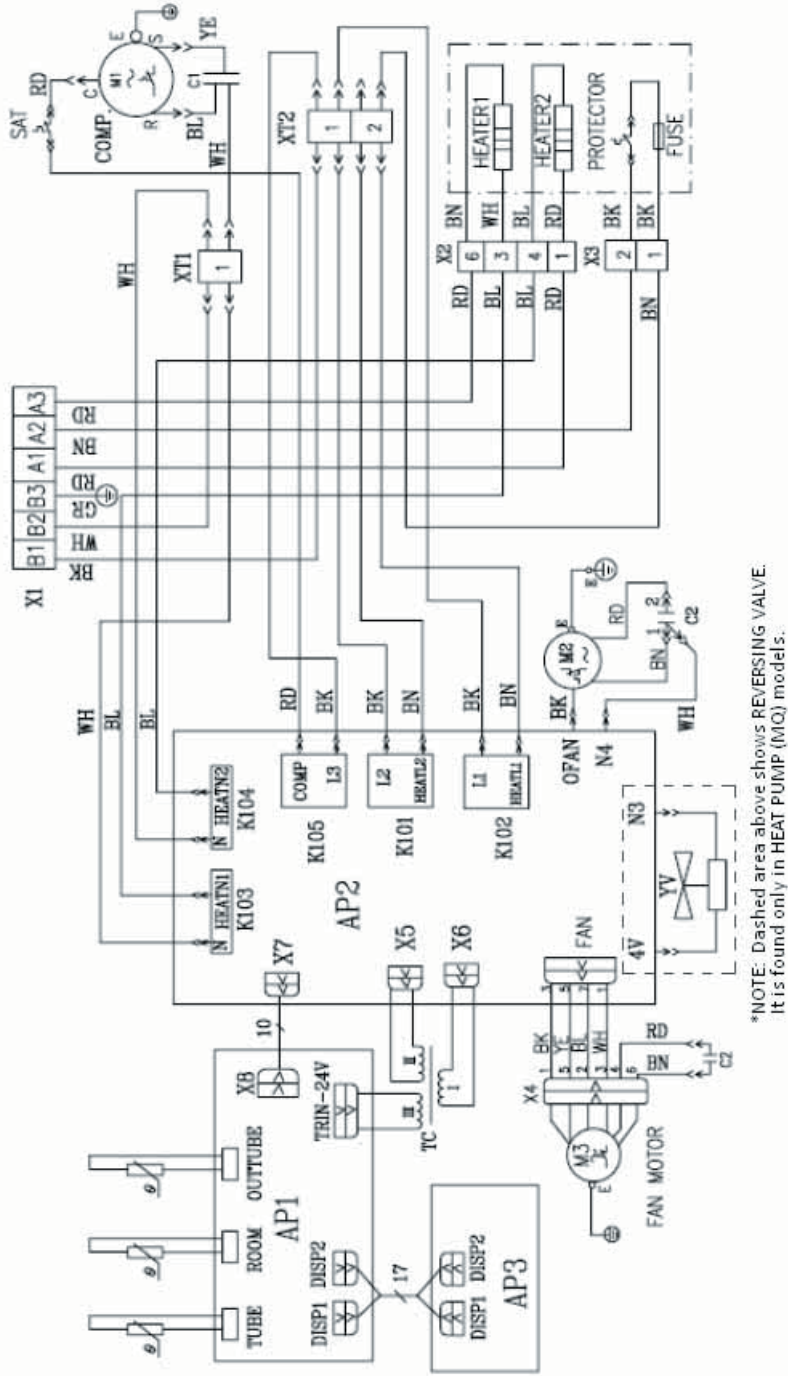
## Sound Transmission Coefficient (STC) = 23

NOTES:

- 1. The tables above indicate the approximate indoor and outdoor sound levels of a 52M unit.
- Tests were conducted in the Carrier Sound Testing Laboratory according to AHRI (Air Conditioning, Heating and Refrigeration Institute) Noise Rating Standard 300 for non – ducted indoor air conditioning equipment.
- 2. NA = Not Available

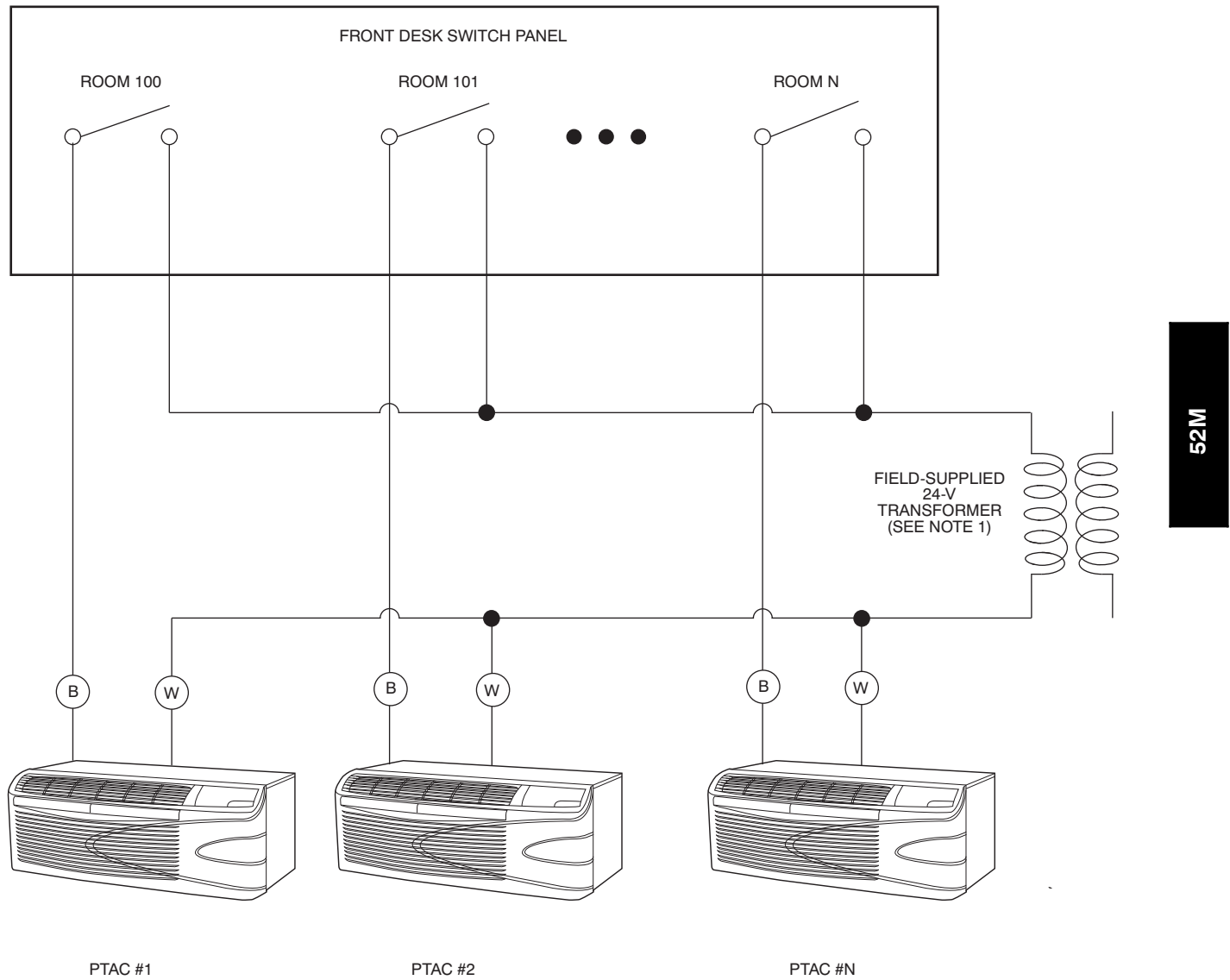
## 52M WIRING SCHEMATIC

LEGEND	
AP1	Main Circuit Board
AP2	Relay Circuit Board
AP3	Display Circuit Board
C1	Compressor Capacitor
C2	Fan Motor Capacitor
HEATER1	2KW Heater
HEATER2	3KW Heater
L1, L2	Electric Heater Relay
L3	Compressor Relay
M1	Compressor Motor
M2	Outdoor Fan Motor
M3	Indoor Fan Motor
N HEATN1	2KW Heater Capacitor
N HEATN2	3KW Heater Capacitor
OUTTUBE	Outdoor Coil Sensor
ROOM	Room Air Temp. Sensor
SAT	Compressor Overload
TC	Transformer
TRIN-24V	Transformer 24 Volt Connector
TUBE	Indoor Coil Sensor
X1	Main Power Connector
X2	Heater Connector
X3	Heater Limit Connector
X4	Indoor Fan Motor Connector
X5, X6	Transformer Connector
X7, X8	Board Jumper Connector
XT1	Terminal Block (White)
XT2	Terminal Block (Black)
YV	Reversing Valve (Heat Pump Units)



### 52M - Typical Wiring Schematic for Standard Units

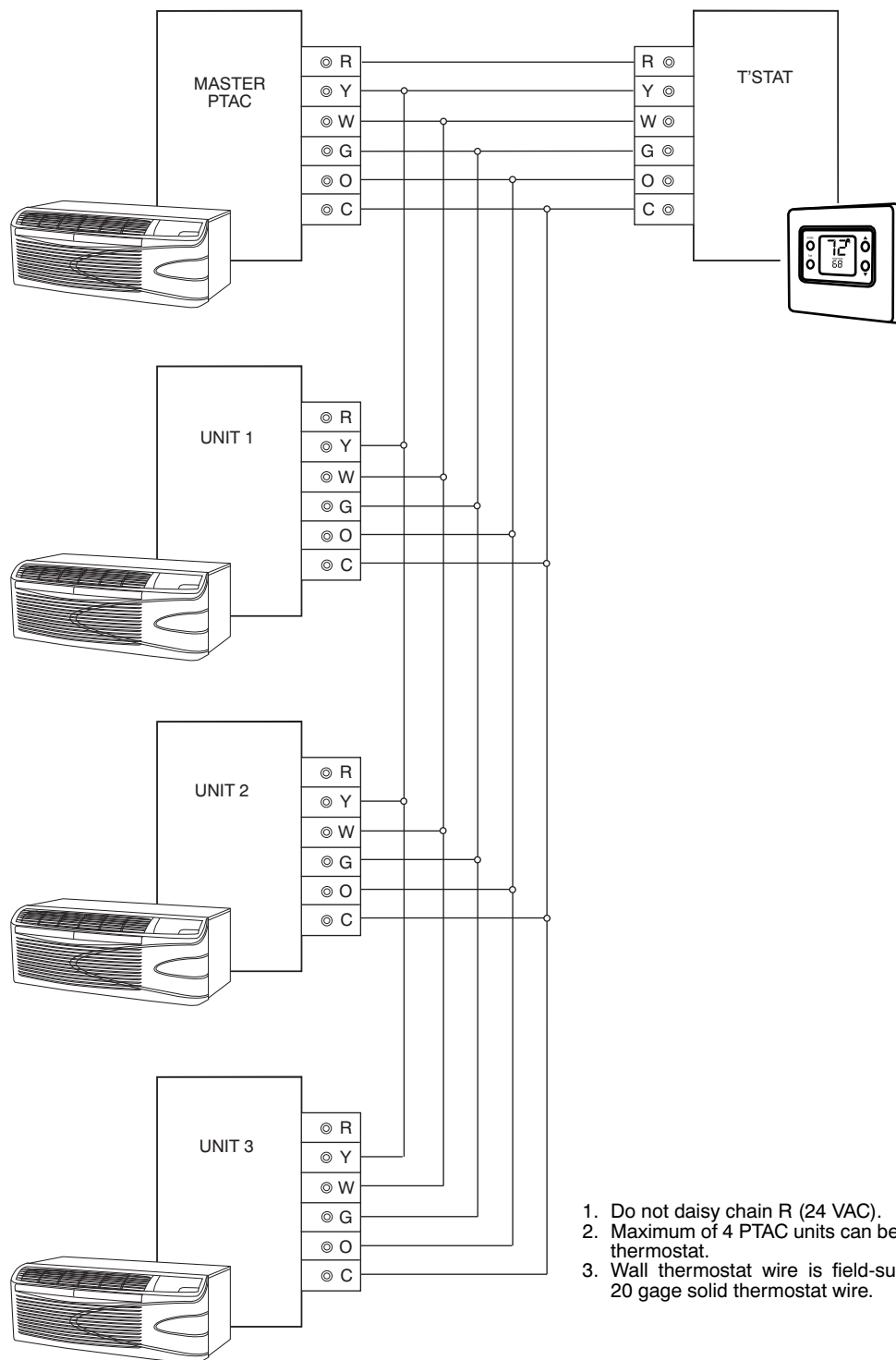
# TYPICAL WIRING SCHEMATIC FOR ENERGY MANAGEMENT INTERFACE



- LEGEND
- AWG** — American Wire Gage
  - B** — Black
  - PTAC** — Packaged Terminal Air Conditioner
  - W** — White

- NOTES:
- To size transformer, use the following equation:  
Quantity of PTAC units x 12 va = Transformer Size (va)  
Example: 110 PTAC Units x 12 va = 1320 va Transformer
  - Following are recommended wire sizes:
- | AWG WIRE SIZE NO. | MAXIMUM LENGTH ft (m) |
|-------------------|-----------------------|
| 24                | 400 (121.9)           |
| 22                | 600 (182.9)           |
| 20                | 900 (274.3)           |
| 18                | 1500 (457.2)          |
| 16                | 2000 (609.6)          |

# TYPICAL WIRING SCHEMATIC FOR MULTIPLE PTAC UNITS CONNECTED TO A SINGLE WALL THERMOSTAT



1. Do not daisy chain R (24 VAC).
2. Maximum of 4 PTAC units can be connected to one single wall thermostat.
3. Wall thermostat wire is field-supplied and should be 18 to 20 gage solid thermostat wire.



# PACKAGED TERMINAL COOLING UNIT WITH HEAT PUMP OR ELECTRIC HEATING

## HVAC Guide Specifications

### Size Range:

Cooling: 7,000 to 15,000 Btuh (2051 to 4396 WH)

Electrical Heating: 5,600 to 17,100 Btuh (1641 to 5015 WH)

Heat Pump: 6,400 to 13,500 Btuh (1876 to 3956 WH)

### Carrier Model Numbers:

52ME Performance Series, Cooling with Electric Heat

52MQ Performance Series, Heat Pump with Electric Heat

## Part 1 — System Description

Packaged Terminal Air Conditioners shall be of the sizes and capacities as shown on the contract drawing schedule and in the specifications.

System shall be tested to insure no water infiltration into the room, when tested at eight inches of rain per hour with 40 mph (64.4 KPh) wind.

### The complete system shall consist of the following:

- A. **Packaged Terminal Heat Pump or Heat/Cool Chassis** : See section 2 – Chassis Description
- B. **Power Cord OR Hardwire Kit** shall provide the power connection to the unit.
- C. **Insulated Polymer Wall Sleeve** shall provide excellent thermal insulation, be textured to hide scratches and prevent shine, will have superior outdoor noise absorption and shall be corrosion free for the life of the product. The Wall Sleeve must have dimensions of 42" (1067 mm) width x 16" (406 mm) height x 14-7/8" (377.8 mm) depth and be shipped with a rear weather barrier installed.
- D. **Wall Sleeve Molding** shall trim the wall sleeve to the existing wall, to hide wall imperfections and irregularities due to the sleeve opening.
- E. **Outdoor Polymer Louvered Grille** shall resist corrosion, breakage and match the color specified on drawing schedule and specifications.
- F. **Subbase** will support the wall sleeve when it extends into the room more than 4" (101.6 mm). Subbase must come from the factory pre-assembled, with a built in receptacle (size as specified on drawing schedule and specifications).

## Part 2 — Chassis Description

### 2.1 General:

The chassis shall be a factory-assembled, single-piece heating and/or cooling unit, that is simple to install and operate. Just slide the chassis into a wall sleeve, plug it into an outlet, and operate after installation. The chassis dimensions shall not exceed 42" (1067 mm) wide and 16" (406 mm) high with room cabinet in place. The chassis shall consist of the following functional sections and components:

#### A. Certifications:

System shall be approved and certified by UL & UL, Canada. Chassis capacity and efficiency performance shall be certified in accordance with ARI standard 310/380. Chassis shall meet ASHRAE Standard 90.1 for minimum energy efficiency.

#### B. Operating Characteristics:

Chassis shall be capable of starting and running at 115°F (46.1°C) ambient outdoor temperature per maximum load criteria of ARI Standard 310/380.

#### C. Electrical:

The accessory power cord or hardwire kit for the unit will be ordered separately. The power cord accessory will be 58" (1473 mm) for 208/230v models or 15" (381 mm) for 265v models. The Hardwire kit accessory will provide 36" (914 mm) of flexible conduit. The chassis current draw shall be specified on the chassis nameplate and match electrical requirements specified on the Contract drawing schedule and specifications.

The power cord plug configuration shall conform to NEMA standards and the rating shall support the current draw of the electric resistance heater.

For 265v installations, UL codes require the use of an electrical equipped subbase for power cord usage or hardwire conduit for non-corded installations.

#### D. Safeties:

Compressor shall have automatic reset, over temperature and over current protection. The fan motors shall have an inherent, automatic reset over temperature protection. The electric heater shall have two over temperature protectors.

**E. Air Flow System:**

For superior sound and comfort, the airflow system shall consist of two, direct-drive permanently lubricated fan motors. The outdoor fan motor will be single speed, with a dynamically balanced, corrosion resistant, aluminum multi-blade axial flow design, with integrated slinger ring. The indoor fan motor will be three speeds, with a dynamically balanced, aluminum, tangential blower wheel, to assure uniform air distribution and optimal sound. Both Fan Motors shall be of an enclosed design to reduce the effects of moisture and corrosion.

**F. Compressor & Refrigerant:**

The rotary-type Compressor shall be fully hermetic with internal and external vibration isolation. The refrigeration system will be sealed and contain a full refrigerant charge (R-22).

**G. Coils:**

Condenser and evaporator coils to be constructed of high-efficiency copper tubing, necessary to achieve EER and COP rating, as specified on the chassis name plate.

**H. Factory-Installed Electric Heater:**

The factory-installed, open coil type, electric heater is standard in heat/cool and heat pump chassis. The electric heater shall contain both an automatic reset and a one-shot over temperature protection device. The heating capacity of the electric heater shall be as identified on the Contract drawing schedule and in the specifications.

**I. Controls:**

All standard models shall be equipped with electronics, for added features and improved reliability of the unit.

The chassis shall have an easy to operate, user friendly, electronic display with simple to push, large digital buttons. All will be easily accessible and covered by a hinged door.

The mode selection control shall consist of OFF, FAN ONLY, HEAT or COOL operations. There will be 3 optional Fan Speed Options, LOW, MED or HIGH. The temperature selection will be controlled by color coded, simple to operate warmer and cooler buttons. The upper and lower setpoint temperature limits, can be easily configured.

All models shall have a configuration dipswitch, easily accessible for the maintenance person, optimal comfort settings, CONTINUOUS or CYCLE fan mode in HEATING, CONTINUOUS or CYCLE fan mode in COOLING, FREEZE

GUARD enabled or disabled, WALL THERMOSTAT enabled or disabled, EMERGENCY HEAT (for heatpumps), and 4 optional SETPOINT LIMIT selections.

Fan cycle configuration switches, will allow continuous fan operation for maximum comfort or cycle operation for maximum energy savings. Settings can be different for both heating and cooling operations, for maximum comfort and efficiency.

All standard models shall have Temperature Limiting control, with four easy to configure settings. Temperature limiting allows a room temperature range to be set, to avoid extreme temperature settings, to maximize energy savings.

Emergency Heat Switch (Heat Pump Models Only) shall disable the compressor in heating mode and only allow the use of electric heat during heating cycles. The Emergency Heat switch is active at all outdoor ambient temperatures.

All units shall be capable of interfacing to a wall thermostat; have a blank out label to cover the control panel for wall thermostat applications; and have a removable wall thermostat terminal block, to simplify field wiring. No additional field-installed kits shall be required.

Wall thermostat interface shall provide two fan speed selections to maximize comfort.

Compatible with 2 wire central desk control systems.

Freeze Guard to automatically activate the electric heater and indoor fan to warm the room, to prevent damage from freezing temperatures. Freeze guard will be active as long as there is power supplied to the unit. Unit shall have the ability to disable Freeze guard, if needed.

Unit shall have the option to display temperature in °F or °C.

Unit will have memory; in case power is lost, unit will return to all previous settings.

Unit will have a random compressor restart after a power outage, to prevent power surges due to many units turning on at the same time.

Room temperature sensing shall use a Solid state thermostat control.

- J. Front Panel (supplied with chassis):** Front panel shall be constructed of a polymer material to resist breakage and corrosion. It shall have a front louvered surface with integrated control door and air filters. The air filters shall be easily accessible without removing the front panel from the chassis.
- K. Air Filters:** The chassis shall contain air filters, with a minimum of 40% arrestance per ASHRAE Standard 52.1. Two easily accessible front access supply air filters, shall be interchangeable, washable and permanent type. The vent filter shall be a one-piece, removable and washable type filter.
- L. Bi-Directional Discharge Grille:** Bi-directional polymer discharge grille shall resist corrosion and breakage. It shall be easily set to direct air at 40 degrees from horizontal or 80 degrees from horizontal. This non-metallic discharge grille shall be cool to the touch during the heating cycle.
- M. Ventilation:** The chassis shall have a manual adjustable fresh air vent with a concealed manual control. The vent control shall allow a maximum of up to 65 CFM of fresh air to be drawn into the room when the indoor fan is operating and the door is open.
- N. High Efficiency Condensate Removal System:** The chassis shall have a condensate removal system consisting of a condensate suction port, to draw and atomize condensate, and a slinger ring integrated in the outdoor fan, to disperse condensate onto the condenser coil to be evaporated.
- O. 2-piece Condenser Coil Shroud:** The condenser coil shroud shall be two pieces, to allow easy access to service and maintain components in the condenser section.
- P. Accessories:**
1. **Power Cord** (PN: PWRCORD-xxxV-xxA) accessory, is required for all corded applications.
  2. **Hardwire kit** (PN: 52M-HDWR-KIT-xxA) shall be required if an accessory power cord is not used. The hardwire kit provides a permanent connection to the unit and shall have 36" (914 mm) of flexible steel conduit and a plug-in connector for easy connect/disconnect.
  3. **Insulated Polymer Wall Sleeve** (PN: SLEEVE-INSUL-1PK) shall be made from a molded polymer, with factory installed Styrofoam insulation and a minimum flammability rating of UL94-5V. The sleeve surface shall be textured to prevent shine and hide scratches.
  4. **Deep Wall Metal Wall Sleeve** (up to 28" / 711.2 mm.) (PN: SLEEVE-EXTxx-1PK) shall be a one-piece, extended wall sleeve, with factory installed insulation and deep wall baffles integrated.
  5. **Sleeve Molding** (PN: SLEEVE-MOLDING) shall trim the wall sleeve to the existing wall to hide wall joints and irregularities due to the sleeve opening.
  6. **Architectural Grille** (PN: GRILLE-PLA-xxxxx or GRILLE-ALU-xxxxx) shall be polymeric for long durable life or painted aluminum for a superior color match to the building.
  7. **Subbase** (PN: SUBBASE-xxxV-xxA) shall be pre-assembled from the factory and UL listed. Subbase options include:
    - **Non-electrical subbase:** The non-electrical subbase shall be pre-assembled and provides mechanical support and requires no wiring.
    - **Electrical subbase:** The electrical subbase shall be pre-assembled with factory-installed electrical junction box containing a receptacle for corded units.
  8. **Drain kit** (PN: DRAIN-KIT-4PK): This universal drain kit shall be used internally or externally to route excess condensate to a drainage system. It can be field-installed on any Carrier wall sleeve. The drain kit shall be attached to the exterior right or left side of the wall sleeve for external draining or may be mounted to the bottom of the wall sleeve for internal draining. The drain kit shall include both a straight tube and a 90° bend tube.
  9. **Wall Thermostats** (PN: PTACSTAT-NP-HC-A & PTACSTAT-NP-HP-A) The digital wall thermostat shall have a large LCD display with backlighting, operate with 24VAC, be non-programmable, easy to use and provide maximum guest comfort.

### **3.0 DELIVERY, STORAGE, AND HANDLING**

The packaging of the chassis shall be sufficient to protect the chassis from damage during shipment via an enclosed truck. Chassis must also be able to withstand an impact force of 8 g's and a random continuous force of 1g, during shipping.

Chassis, wall sleeves, and grilles shall be shipped in separate cartons. Universal handling instructions shall be defined and visible on the carton, from front, back and sides.

Chassis shall be capable of withstanding temperatures from -40°F to 155°F (-40°C to 68.3°C), at 5 to 95 percent RH, non-condensing, during shipment and storage, without component failure.

# ACCESSORIES

ACCESSORY	FORM NUMBER	PART NUMBER	DESCRIPTION
Wall Sleeves	52S-48SI	WALL-SLEEVE-1PK SLEEVE-INSUL-1PK	Non-Insulated Polymer Wall Sleeve, 1 per pack Insulated Polymer Wall Sleeve, 1 per pack
	52S-50SI	SLEEVE-STEEL-1PK	Insulated Metal Wall Sleeve, 1 per pack
	52S-49SI	SLEEVE-EXT18-1PK SLEEVE-EXT24-1PK SLEEVE-EXT26-1PK SLEEVE-EXT28-1PK	Extended Metal Wall Sleeve for Deep Wall Applications (18 in./ 457 mm deep), 1 per pack Extended Metal Wall Sleeve for Deep Wall Applications (24 in./ 610 mm deep), 1 per pack Extended Metal Wall Sleeve for Deep Wall Applications (26 in./ 660 mm deep), 1 per pack Extended Metal Wall Sleeve for Deep Wall Applications (28 in./ 711 mm deep), 1 per pack
	N/A	SLEEVE-MOLDING	Molding kit to trim the wall sleeve to the wall
	52C,P-26SI	FR-SLEEVE-EXT	Friedrich wall sleeve extension to retrofit Carrier PTAC unit into Friedrich 11-1/2" (292.1 mm) deep (T Series) wall sleeve. 1 per pack
Exterior Grilles*	52S-59SI	GRILLE-ALU-STAMP	Stamped Aluminum Exterior Grille, Clear Finish
	52S-65SI	GRILLE-PLA-BROWN GRILLE-PLA-BEIGE GRILLE-PLA-ALPIN	Brown Polymer Architectural Rear Grille, Beige Polymer Architectural Rear Grille, Alpine (matches Carrier Wall Sleeve)
	52S-60SI	GRILLE-ALU-CLEAR GRILLE-ALU-WHITE GRILLE-ALU-BRONZ GRILLE-ALU-MBRNZ GRILLE-ALU-BROWN GRILLE-ALU-BEIGE GRILLE-ALU-ALPIN GRILLE-ALU-PEACH GRILLE-ALU-MELON GRILLE-ALU-LGREY GRILLE-ALU-SGREY GRILLE-ALU-RDBRK GRILLE-ALU-BLUE GRILLE-ALU-GREEN	Aluminum Architectural Exterior Grille, Clear Finish Aluminum Architectural Exterior Grille, White Aluminum Architectural Exterior Grille, Light Bronze Aluminum Architectural Exterior Grille, Medium Bronze Aluminum Architectural Exterior Grille, Brown (Dark Bronze) Aluminum Architectural Exterior Grille, Beige Aluminum Architectural Exterior Grille, Alpine (matches Carrier Wall Sleeve) Aluminum Architectural Exterior Grille, Peach Aluminum Architectural Exterior Grille, Melon Aluminum Architectural Exterior Grille, Light Grey Aluminum Architectural Exterior Grille, Slate Gray Aluminum Architectural Exterior Grille, Red Brick Aluminum Architectural Exterior Grille, Blue Aluminum Architectural Exterior Grille, Green
	52C,P-31SI	BAFFLE-KIT-1PK	Ensures good air seal and prevents air recirculation when Carrier sleeve is used with a non-Carrier grille.
Subbase	52C,P-1SI	SUBBASE-NON-ELEC	Non-electrical Subbase
	52C,P-2SI	SUBBASE-230V-15A SUBBASE-230V-20A SUBBASE-230V-30A	Electrical subbase with factory-installed 208/230V, 15 amp receptacle Electrical subbase with factory-installed 208/230V, 20 amp receptacle Electrical subbase with factory-installed 208/230V, 30 amp receptacle
	52C,P-17SI	SUBBASE-265V-15A SUBBASE-265V-20A SUBBASE-265V-30A	Electrical subbase with factory-installed 265V, 15 amp receptacle Electrical subbase with factory-installed 265V, 20 amp receptacle Electrical subbase with factory-installed 265V, 30 amp receptacle
	52C,P-4SI	SUBBASE-SWITCH	Field-Installed Switch kit for an electrical subbase
Subbase Field-Installed Kits	52C,P-5SI	SUBBASE-FUSE-15A SUBBASE-FUSE-20A SUBBASE-FUSE-30A	Field-Installed Fuse Kit (15 amp) for electrical subbase Field-Installed Fuse Kit (20 amp) for electrical subbase Field-Installed Fuse Kit (30 amp) for electrical subbase
Sleeve Support	52C,P-29SI	LEVELING-LEGS	Attaches to wall sleeve for accurate and adjustable leveling and support for units without a subbase
Electrical Connections	52M-HDWR-KIT-01	52M-HDWR-KIT-15A 52M-HDWR-KIT-20A 52M-HDWR-KIT-30A	Permanent power connection to the unit (includes 36" (914.4 mm) of flexible conduit and unit-mounted connector, 230/208V and 265V) 1 per pack
	11K-PWRCORD-01	PWRCORD-230V-15A PWRCORD-230V-20A PWRCORD-230V-30A PWRCORD-265V-15A PWRCORD-265V-20A PWRCORD-265V-30A	Required accessory power cord. Order cord based on voltage and amperage of electrical circuit being used to power PTAC.
	11K-52M-CONDUIT-01	52M-CONINT-15A 52M-CONINT-20A 52M-CONINT-30A	Provides a wired interface between existing hardwire conduit and the 52M unit. Kit includes unit power connector with pigtails, conduit fasteners, and metal shield.
Condensate Drain Kit	52S-53SI	DRAIN-KIT-4PK	Attaches to wall sleeve for controlled internal or external disposal of condensate-4 per pack
Remote Room Temperature Sensor	N/A	ZONECC0RRS01	Remote room temperature sensor
Wall Thermostats	N/A	PTACSTAT-NP-HC-A PTACSTAT-NP-HP-A TC-PAC01 TC-PHP01	Comfort Series Non-Programmable Thermostat (heat/cool) Comfort Series Non-Programmable Thermostat (HP) Comfort Series Programmable Thermostat (AC) Comfort Series Programmable Thermostat (HP)
Wall Thermostat Locking Covers	N/A	TSTAT-COVER-6X7	Clear plastic locking thermostat cover prevents unauthorized access to thermostat. Cover for use with non-programmable and electro-mechanical thermostats. Outside dimensions: 6-1/2" X 7-1/2" X 2-15/16" (165.1 mm X 190.5 mm X 74.6 mm). 1 per pack
	N/A	TSTAT-COVER-7X10	Clear plastic locking thermostat cover prevents unauthorized access to thermostat. Cover for use with programmable thermostats. Outside dimensions: 7-1/4" X 9-3/4" X 3-3/8" (184.2 mm X 247.7 mm X 85.7 mm). 1 per pack
Replacement Filters	N/A	52M-AIRFLT-10PK	Replacement air filters in package of 10

\* Custom colors are also available.

52M

[illegible]

52M